



NOAA Data Report ERL PMEL-11

---

CTD/O<sub>2</sub> MEASUREMENTS ON THE CONRAD CRUISE  
SEPTEMBER-OCTOBER 1982

L. J. Mangum  
J. M. Toole  
S. P. Hayes

Pacific Marine Environmental Laboratory  
Seattle, Washington  
February 1985

---

noaa

NATIONAL OCEANIC AND  
ATMOSPHERIC ADMINISTRATION

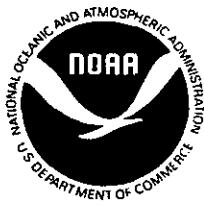
/ Environmental Research  
Laboratories

NOAA Data Report ERL PMEL-11

CTD/O<sub>2</sub> MEASUREMENTS ON THE CONRAD CRUISE  
SEPTEMBER-OCTOBER 1982

L. J. Mangum  
J. M. Toole  
S. P. Hayes

Pacific Marine Environmental Laboratory  
Seattle, Washington  
February 1985



UNITED STATES  
DEPARTMENT OF COMMERCE

Malcolm Baldrige,  
Secretary

NATIONAL OCEANIC AND  
ATMOSPHERIC ADMINISTRATION

Environmental Research  
Laboratories

Vernon E. Derr,  
Director

NOTICE

Mention of a commercial company or product does not constitute an endorsement by NOAA Environmental Research Laboratories. Use for publicity or advertising purposes of information from this publication concerning proprietary products or the tests of such products is not authorized.

## CONTENTS

ABSTRACT.....	1
1.0 INTRODUCTION.....	2
2.0 NBIS CTD DATA PROCESSING.....	2
3.0 DATA PRESENTATION.....	3
4.0 ACKNOWLEDGMENTS.....	3
REFERENCES.....	4
FIGURES AND TABLES.....	5

## ABSTRACT

Summaries of CTD/O<sub>2</sub> measurements from the R/V CONRAD cruise in the equatorial Pacific during September and October 1982 are presented. This cruise occurred during the initial stages of the 1982/1983 El Niño/Southern Oscillation (ENSO) event, approximately three months after the trade winds collapsed in the western Pacific and one month after the rise in sea level was seen in the eastern Pacific. In addition to profiles of temperature, salinity, sigma-t and dissolved oxygen, station locations and T-S diagrams are included for each cast. Section plots of the vertical distribution of temperature, salinity, sigma-t and dissolved oxygen are shown for the meridional transects along 130°W and 85°W, and the zonal transect along the equator.

## 1.0 INTRODUCTION

The R/V ROBERT D. CONRAD departed Honolulu on 10 September 1982 and completed CTD profiling sections along 138°W from 5°N to 5°S, along the equator from 138°W to 110°W, and on the eastern trackline from 5°S, 85°W to 6.7°N, 80.3°W. Forty CTD casts were completed during the cruise which ended in Panama on 14 October 1982. The cruise track is shown in Figure 1, and the station locations are indicated in Figure 2. All CTD casts extended to a depth of at least 1000 dbars and eight casts were taken to within 100 dbars of the bottom. Table 1 lists the position, time and depth of each cast.

The timing of the cruise is of particular interest with respect to the 1982/83 ENSO event. Sadler and Kilonsky (1983) report anomalous westerly winds in the western Pacific by June 1982. Sea level started to rise in the central Pacific in July 1982 and increased in the eastern Pacific at the Galápagos in August 1982 (Lukas et al., 1984). Anomalous conditions of the ENSO event persisted throughout the equatorial Pacific until June 1983.

The hydrographic data were collected with a Neil Brown Instrument Systems (NBIS) Mark III CTD equipped with a Beckmann dissolved oxygen probe. The NBIS CTD samples pressure, temperature, conductivity and dissolved oxygen at a rate of 30 Hz (Brown, 1974). The data were recorded during the down cast on an LSI 11/03 online computer. An electronically-fired rosette sampler was used to collect discrete water samples for calibration purposes on the up cast.

## 2.0 NBIS CTD DATA PROCESSING

Using PMEL's NBIS CTD acquisition and processing system (Mangum et al., 1980), the CTD data were recorded in real time on a 9-track magnetic tape. A recursive filter was applied to the conductivity data using techniques described by Horne and Toole (1980) to compensate for the slower temperature response prior to computing 1 dbar averages of the data. No lag correction

was applied to the oxygen data. Pre-cruise calibrations, bottle data and historical data were used to determine the final CTD calibrations, which were applied to the averaged data. Salinity bottle samples collected from each cast were analyzed after the cruise at the University of Washington facility. Salinity measurements are reported in practical salinity units (PSU), based on the UNESCO Report (1978). Dissolved oxygen samples were analyzed during the cruise by Duke University personnel.

### 3.0 DATA PRESENTATION

For each cast, a summary plot, listing and T-S diagram were produced using computer programs described by Holbrook and Halpern (1974). The abbreviations that are used and the available meteorological information are described in Tables 2-7. WHOI subroutines for sigma-t and dynamic height were provided by R.C. Millard, Jr. Meridional sections of temperature, salinity, sigma-t and dissolved oxygen are shown along 138°W from 5°N to 5°S (Figures 3-6), and from 5°S, 85°W to 6.7°N, 80.3°W (Figures 11-14). Additionally, zonal section plots along the equator from 138°W to 110°W are presented in Figures 7-10. H.P. Freitag supplied the contour plotting program which was used to generate the section plots.

### 4.0 ACKNOWLEDGMENTS

The assistance of M. Stapp, H. Miller, A. Cantos-Figuerola, V. Kourafalou and D. Duerr with the CTD system during the cruise and the support of the officers of the R/V CONRAD is gratefully acknowledged. This research was supported in part by the Equatorial Pacific Ocean Climate Studies (EPOCS) project of NOAA and by the National Science Foundation under Grant OCE-8210520 as part of the Pacific Equatorial Ocean Dynamics Program (PEQUOD).

#### REFERENCES

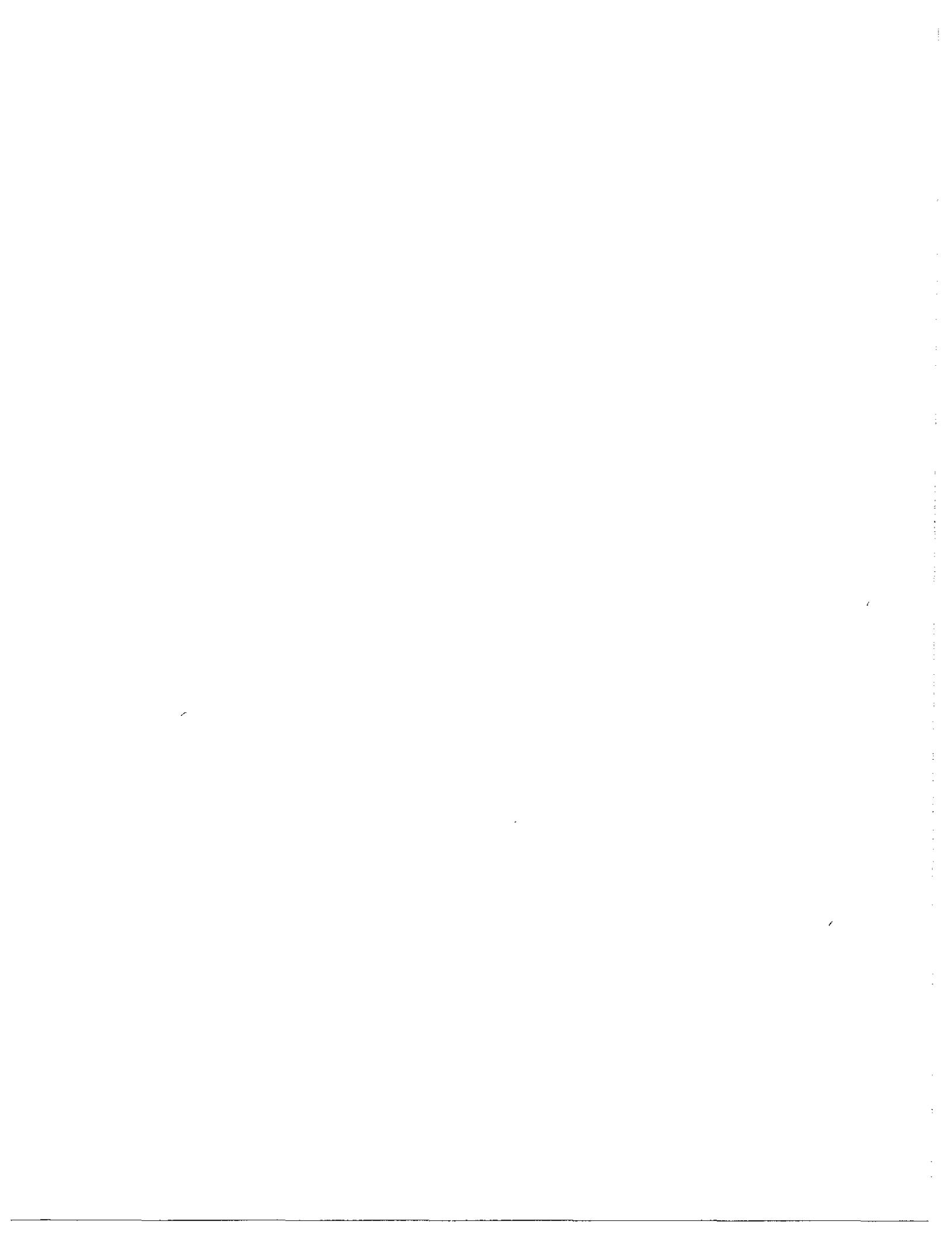
- Brown, N.L., 1974. A precision CTD microprofiler. Ocean 74, 2, 270-278.
- Horne, E.P.W. and J.M. Toole, 1980. Sensor response mismatches and lag correction techniques for temperature-salinity profiles. J. Phys. Oceanogr., 10, 1122-1130.
- Lukas, R., S.P. Hayes, and K. Wyrtki, 1984. Equatorial sea level response during the 1982-1983 El Niño, J. Geophys. Res., 89, 10425-10430.
- Mangum, L.J., N.N. Soreide, B.D. Spell, B.D. Davies, and S.P. Hayes, 1980. CTD/O<sub>2</sub> measurements during the Equatorial Pacific Ocean Climate Study (EPOCS) in 1979. NOAA Data Report ERL PMEL-1, 645 pp.
- Sadler, J.C. and B. Kilonsky, 1983. Meteorological events during evolution of positive SST anomalies in the equatorial Pacific in 1982. Tropical Ocean-Atmos. Newsletter, 16, 3-4.
- UNESCO, 1978. Eighth report of the Joint Panel on Oceanographic Tables and Standards, Woods Hole, March 1977. UNESCO Tech. Paper in Mar. Sci., No. 28, 32 pp.

**FIGURES AND TABLES**



## FIGURES

- Figure 1. Cruise track of R/V CONRAD from 10 September - 14 October 1982 (Honolulu to Panama).
- Figure 2. CTD/O<sub>2</sub> stations occupied during the 1982 CONRAD cruise. Casts were taken to at least a depth of 1000 dbars.
- Figure 3. Temperature (°C) section along 138°W.
- Figure 4. Salinity (psu) section along 138°W.
- Figure 5. Sigma-t (kg/m<sup>3</sup>) section along 138°W.
- Figure 6. Oxygen (ml/l) section along 138°W.
- Figure 7. Temperature (°C) section along the equator.
- Figure 8. Salinity (psu) section along the equator.
- Figure 9. Sigma-t (kg/m<sup>3</sup>) section along the equator.
- Figure 10. Oxygen (ml/l) section along the equator.
- Figure 11. Temperature (°C) section from 5°S, 85°W to 6.7°N, 80.3°W.
- Figure 12. Salinity (psu) section from 5°S, 85°W to 6.7°N, 80.3°W.
- Figure 13. Sigma-t (kg/m<sup>3</sup>) section from 5°S, 85°W to 6.7°N, 80.3°W.
- Figure 14. Oxygen (ml/l) section from 5°S, 85°W to 6.7°N, 80.3°W.



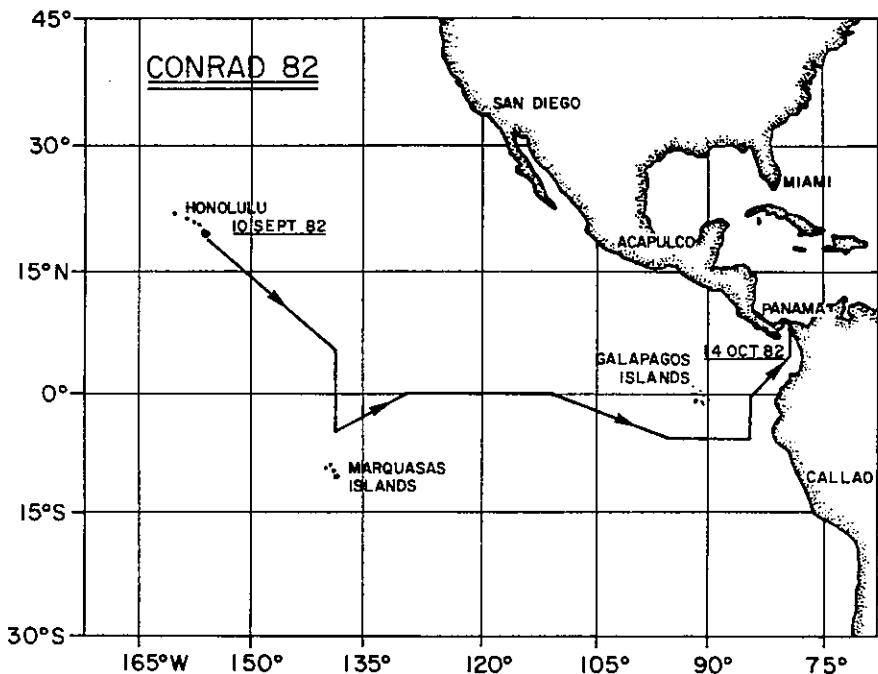


Figure 1. Cruise track of R/V CONRAD from 10 September - 14 October 1982 (Honolulu to Panama).

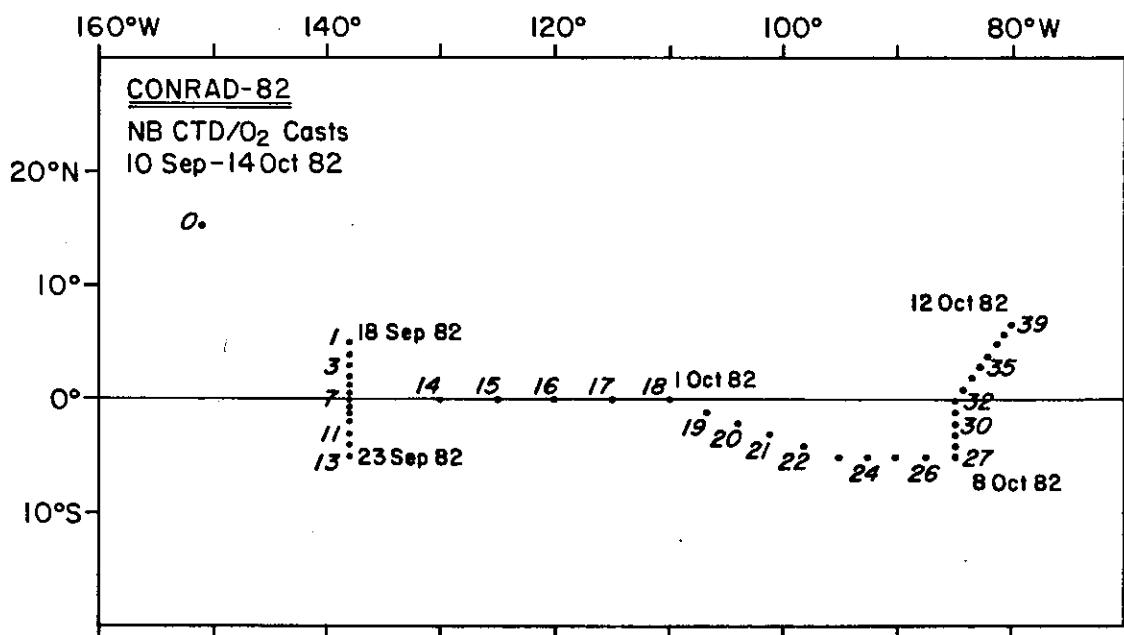


Figure 2. CTD/O<sub>2</sub> stations occupied during the 1982 CONRAD cruise. Casts were taken to at least a depth of 1000 dbars.



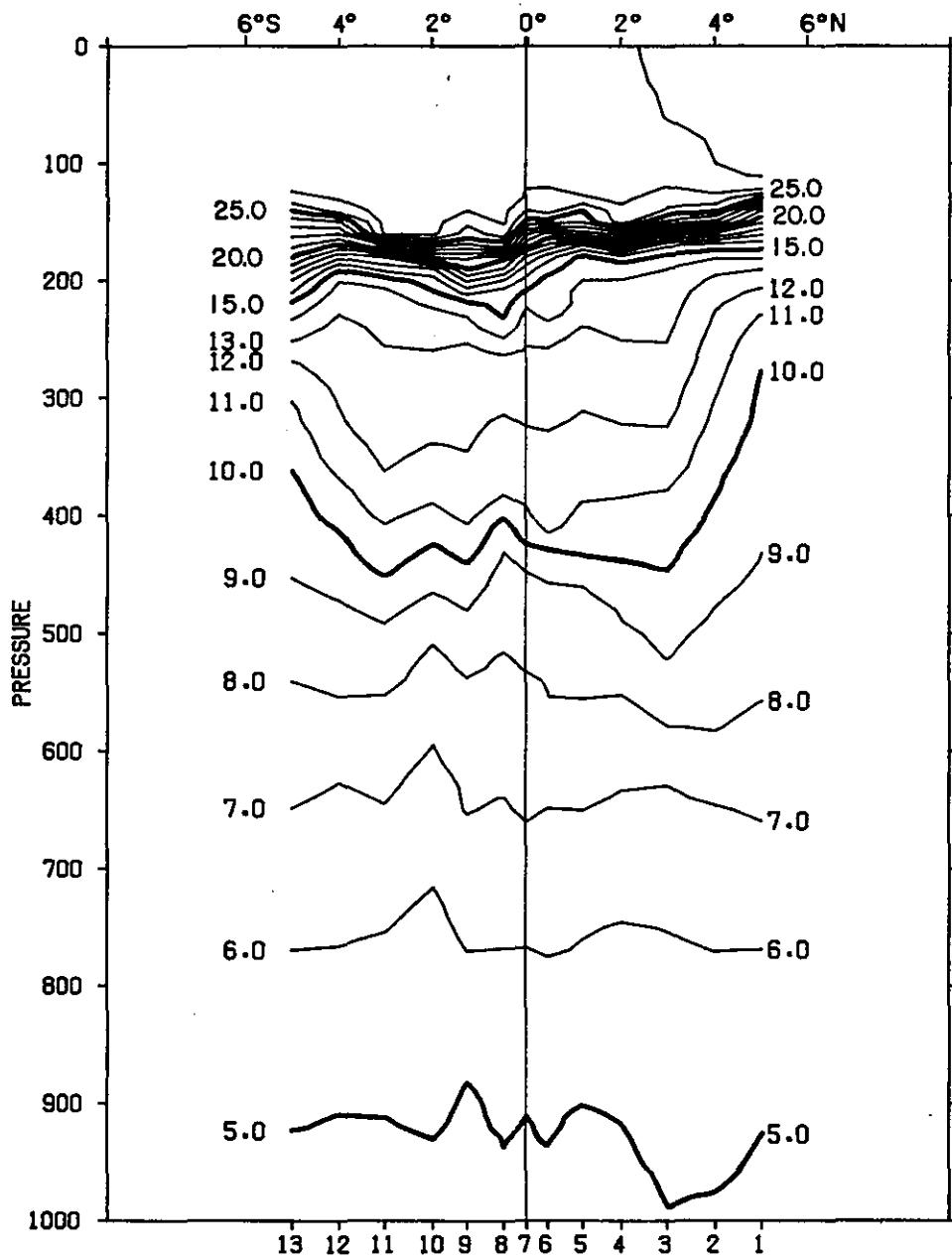
Sections Along 138°W From 5°N to 5°S

CONRAD-82

18 - 23 SEPT 82

138° W

## TEMPERATURE

Figure 3. Temperature ( $^{\circ}\text{C}$ ) section along 138°W.

CONRAD-82      18 - 23 SEPT 82      138° W

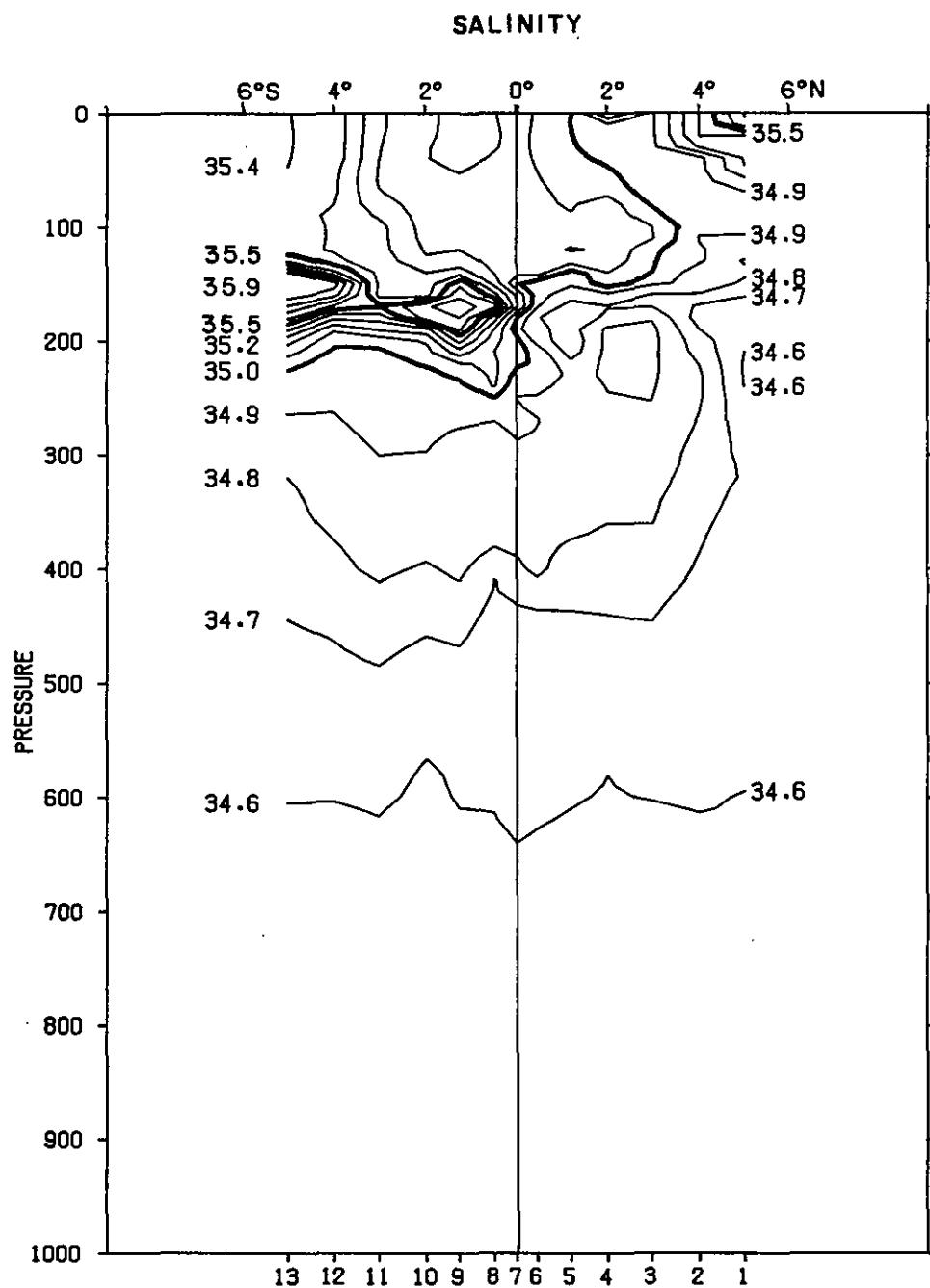


Figure 4. Salinity (psu) section along 138°W.

CONRAD-82      18 - 23 SEPT 82      138 W

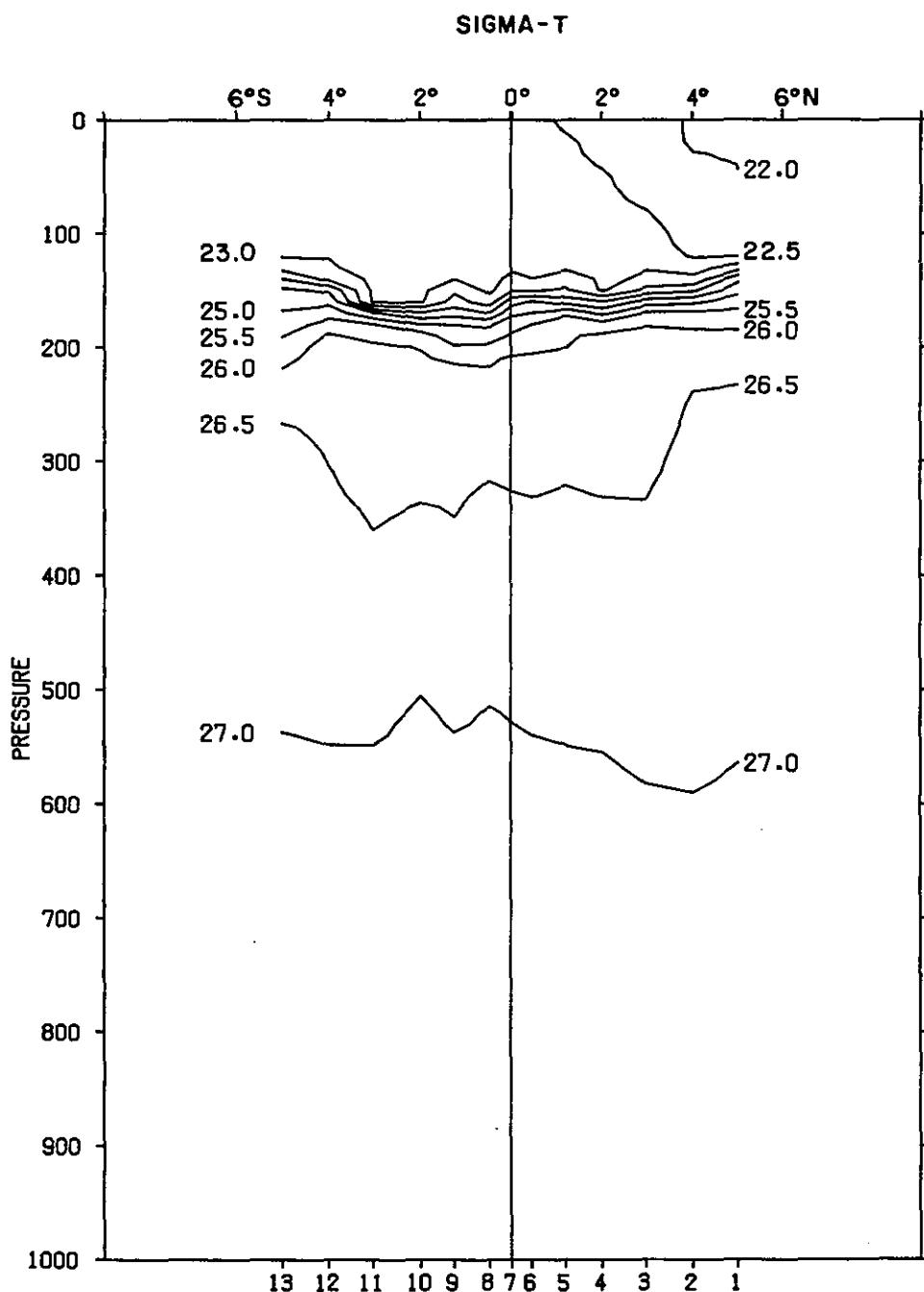


Figure 5. Sigma-t ( $\text{kg}/\text{m}^3$ ) section along  $138^\circ\text{W}$ .

CONRAD-82

18 - 23 SEPT 82

138° W

DISSOLVED OXYGEN

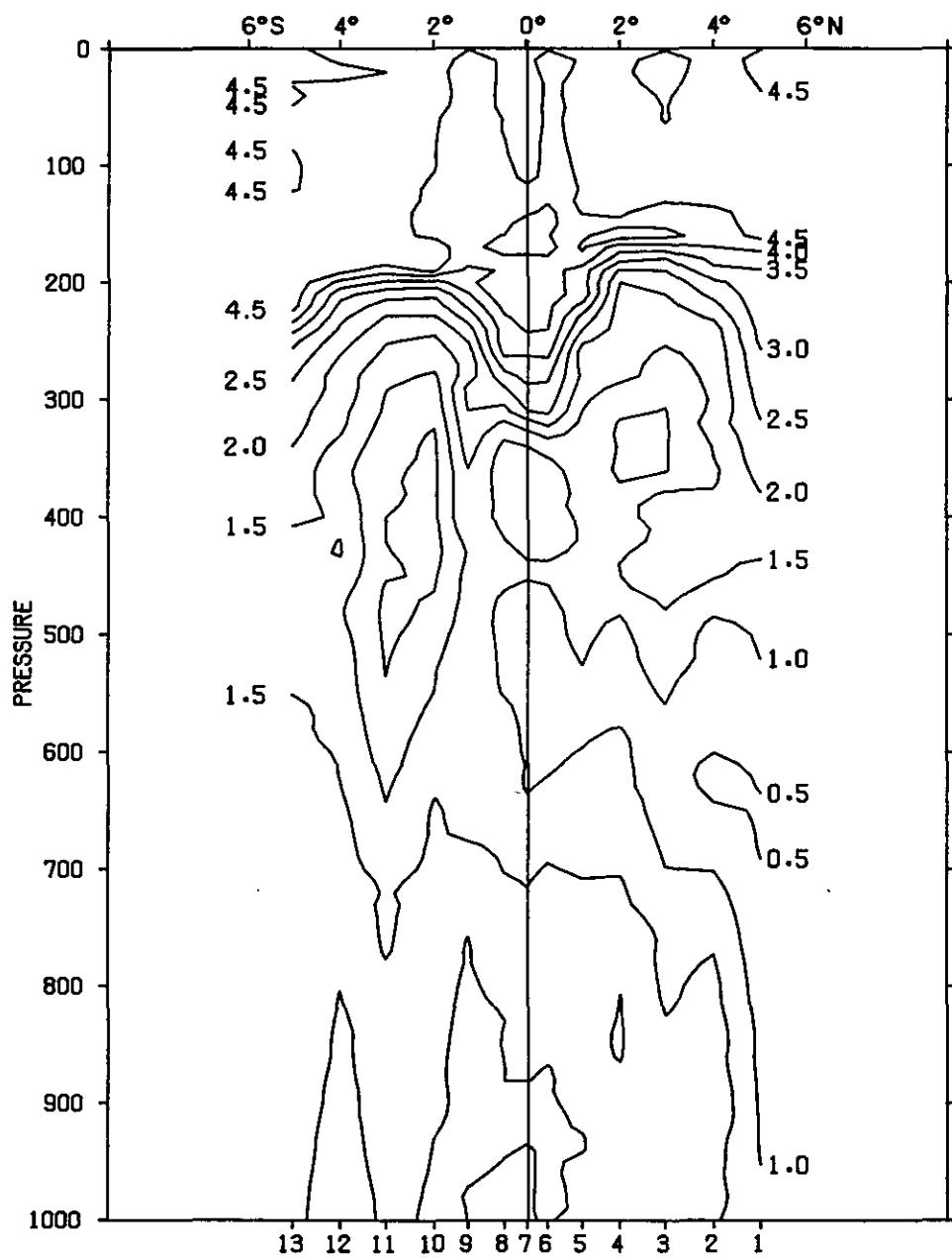


Figure 6. Oxygen (ml/l) section along 138°W.



**Sections Along the Equator From 138°W to 110°W**

CONRAD-82      20 SEPT - 1 OCT 82

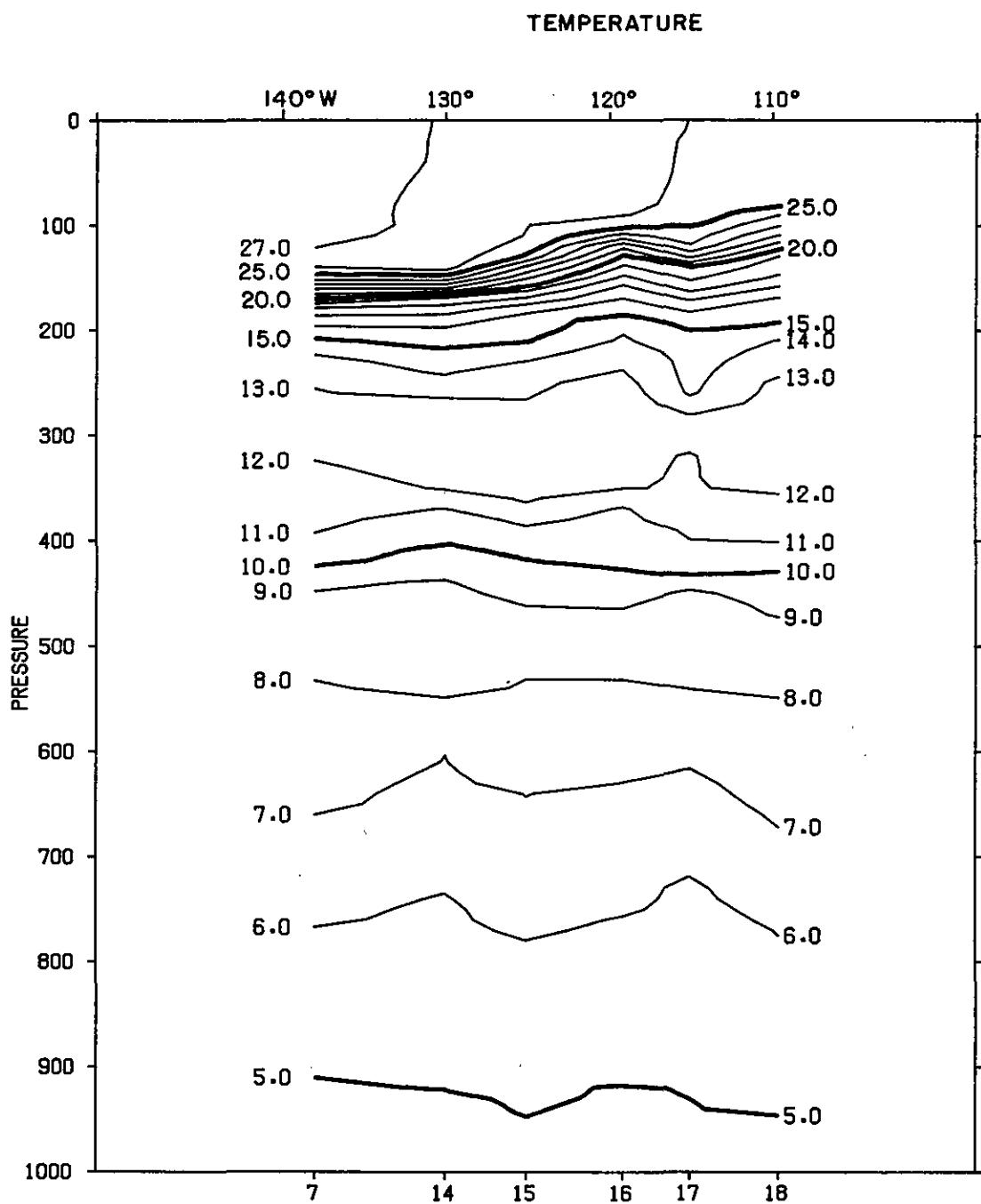


Figure 7. Temperature ( $^{\circ}\text{C}$ ) section along the equator.

CONRAD-82      20 SEPT - 1 OCT 82

SALINITY

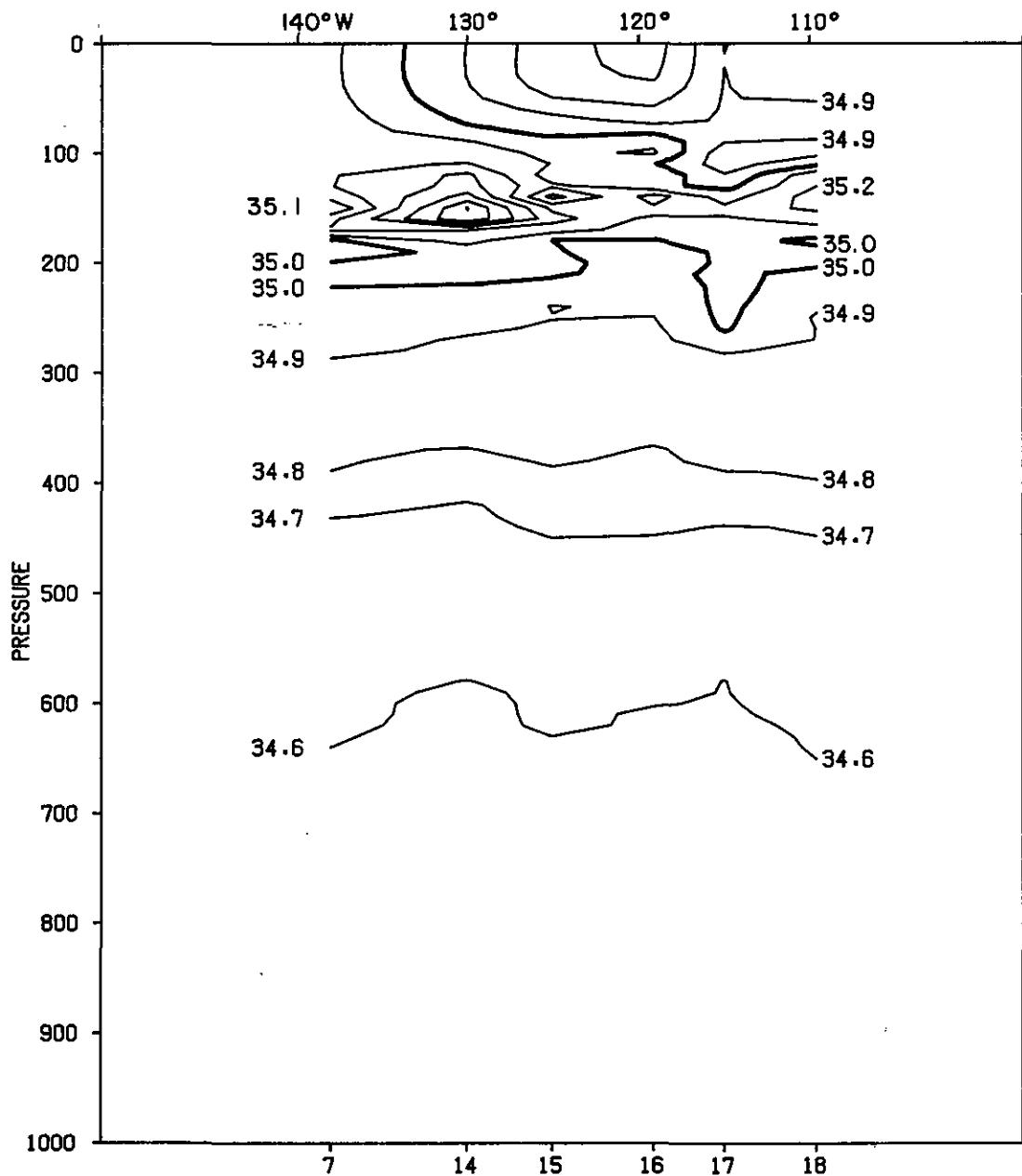


Figure 8. Salinity (psu) section along the equator.

CONRAD-82      20 SEPT - 1 OCT 82

SIGMA-T

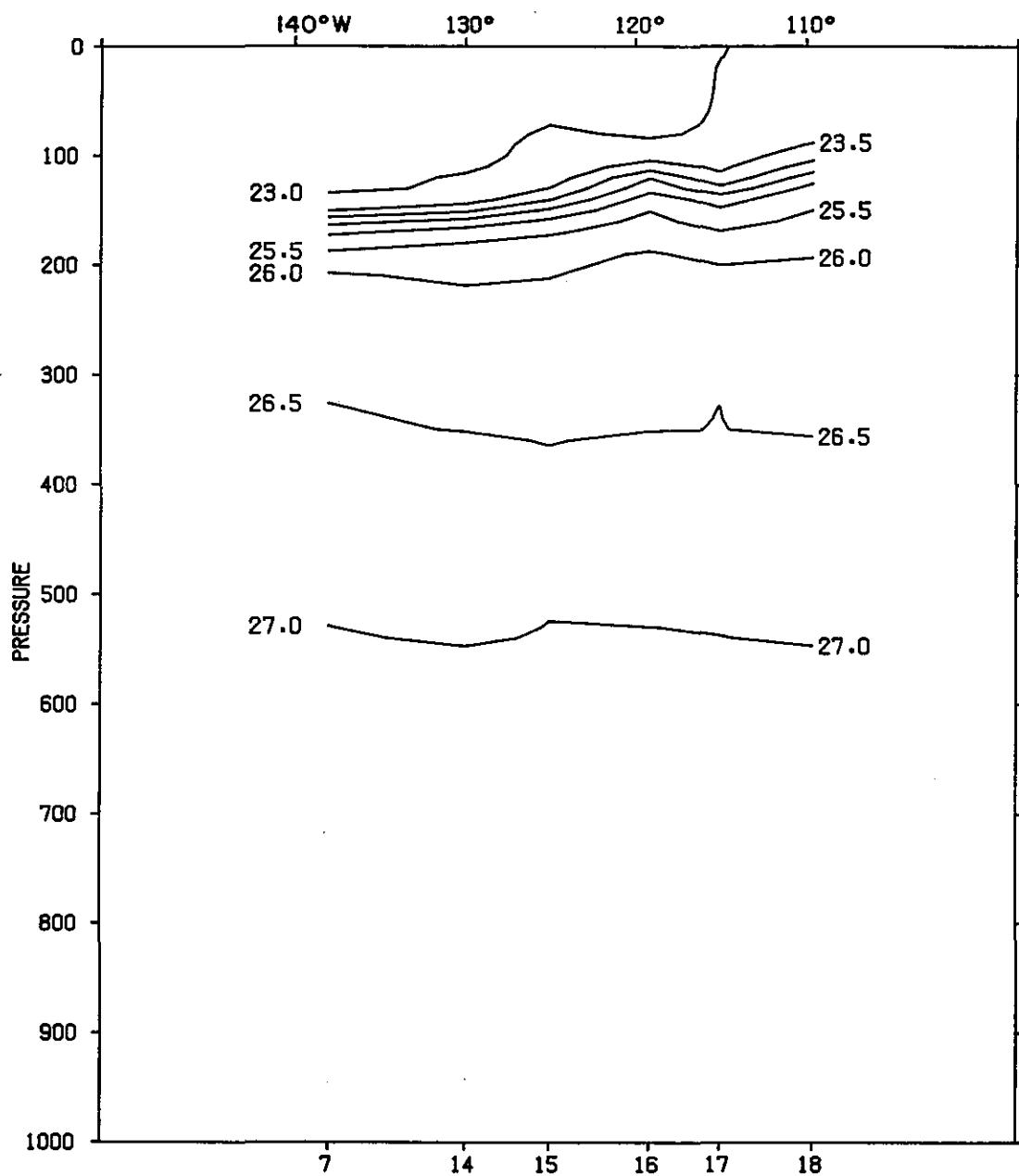


Figure 9. Sigma-t ( $\text{kg}/\text{m}^3$ ) section along the equator.

CONRAD-82      20 SEPT - 1 OCT 82

DISSOLVED OXYGEN

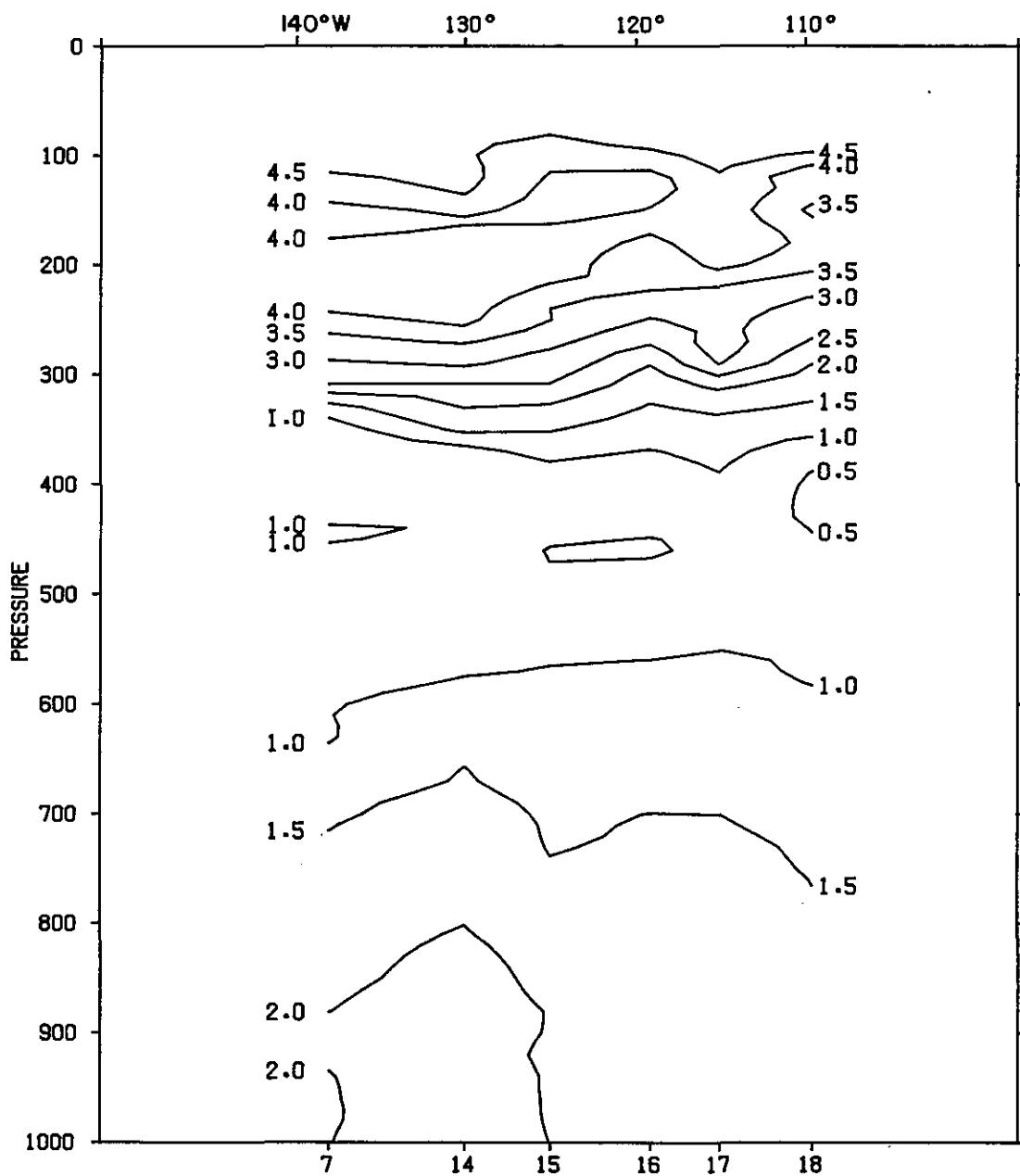


Figure 10. Oxygen (ml/l) section along the equator.



Sections Along  $85^{\circ}\text{W}$  -  $80^{\circ}\text{W}$  From  $5^{\circ}\text{S}$  to  $7^{\circ}\text{N}$

CONRAD 8 - 12 OCT 1982 85 W - 80 W

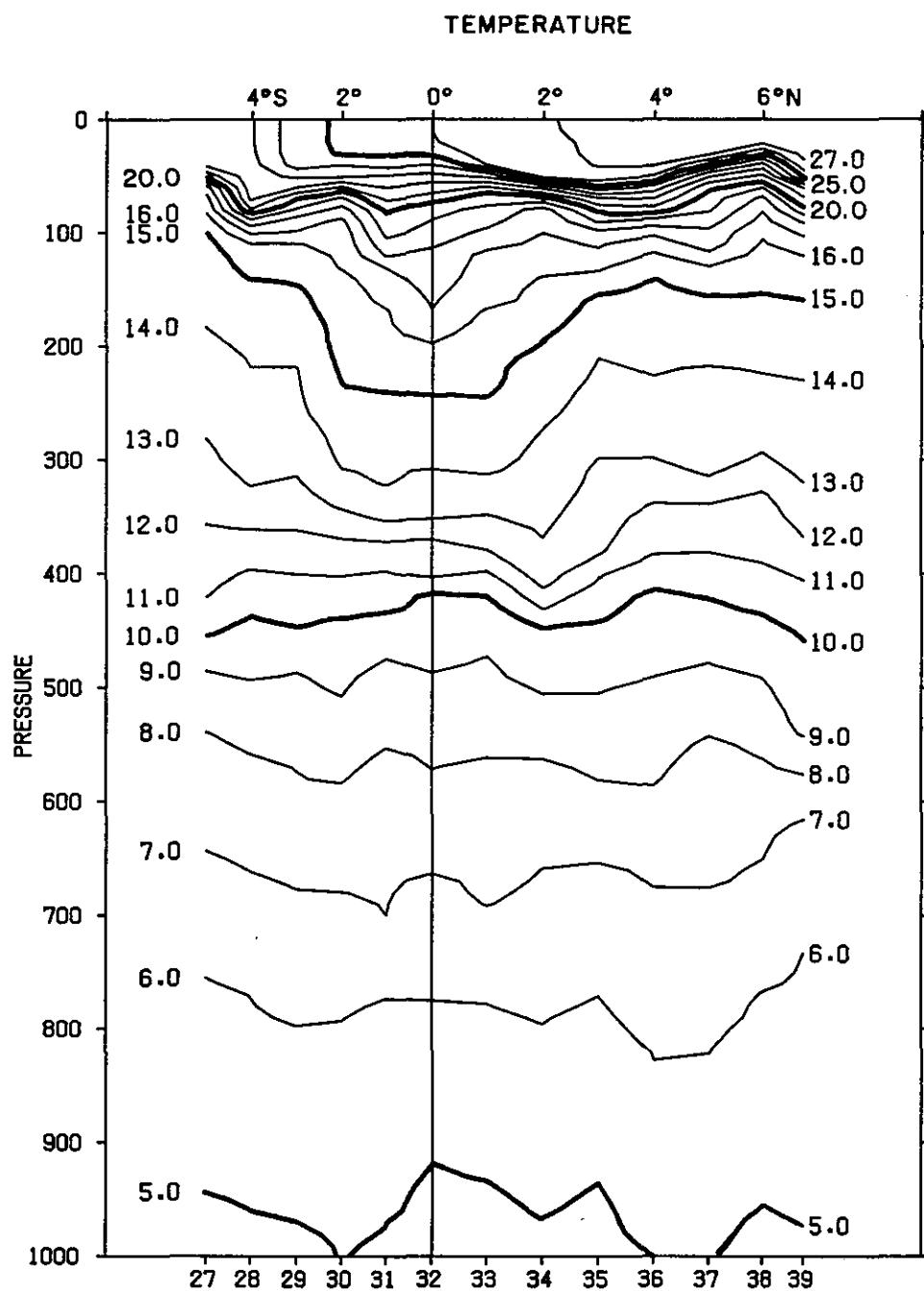


Figure 11. Temperature ( $^{\circ}\text{C}$ ) section from  $5^{\circ}\text{S}$ ,  $85^{\circ}\text{W}$  to  $6.7^{\circ}\text{N}$ ,  $80.3^{\circ}\text{W}$ .

CONRAD 8 - 12 OCT 1982 85 W - 80 W

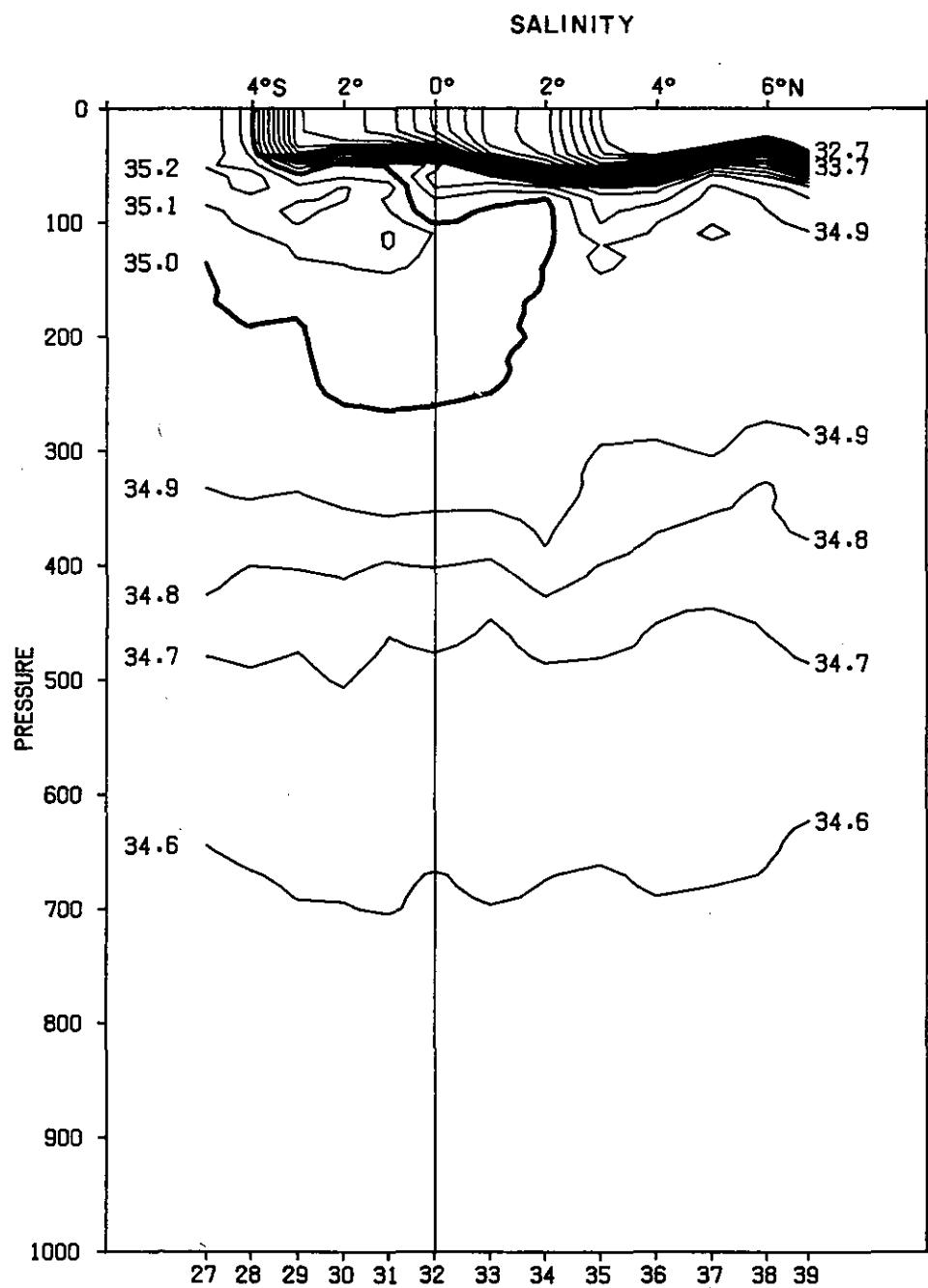


Figure 12. Salinity (psu) section from 5°S, 85°W to 6.7°N, 80.3°W.

CONRAD 8 - 12 OCT 1982 85 W - 80 W

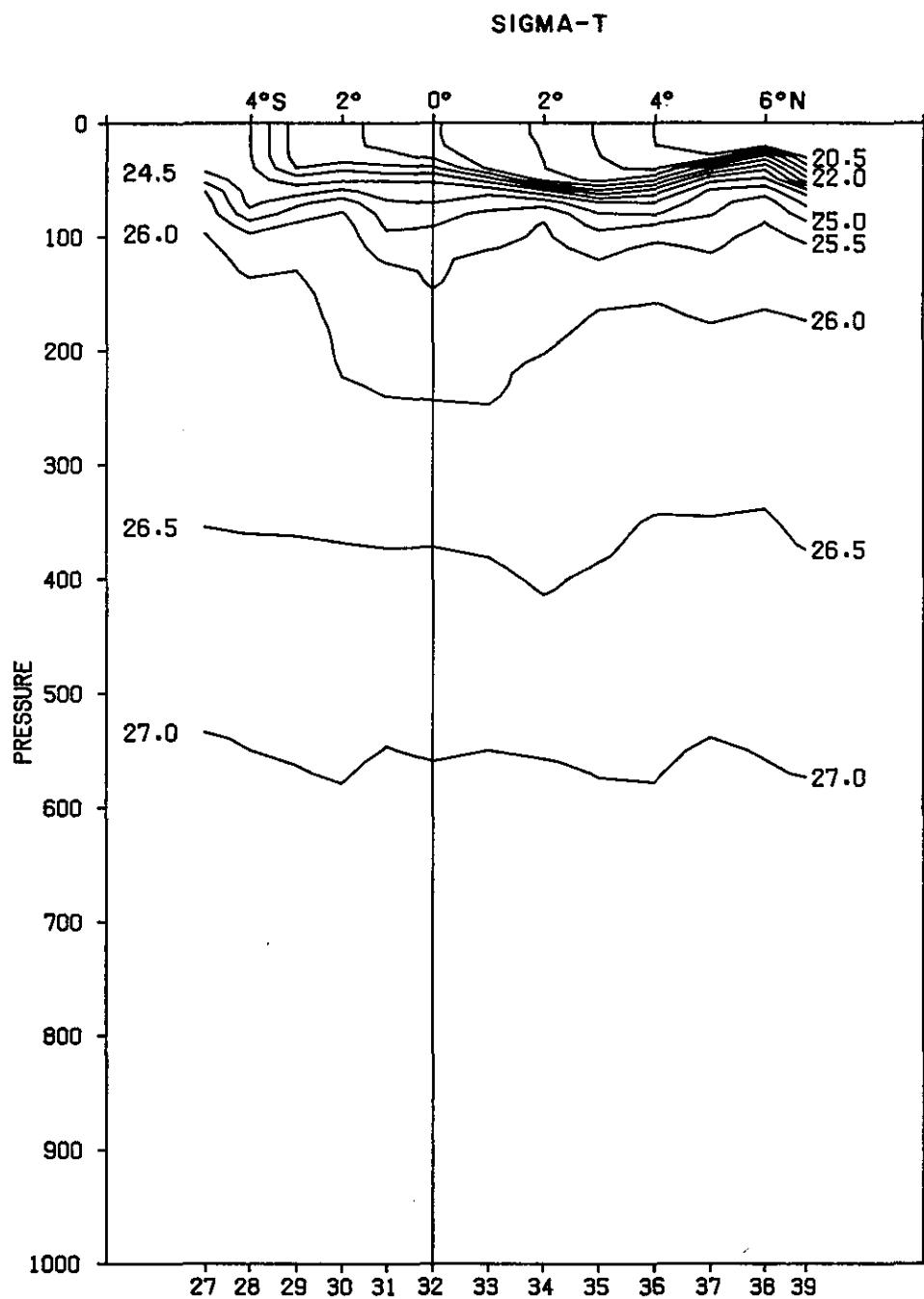


Figure 13. Sigma-t ( $\text{kg}/\text{m}^3$ ) section from  $5^\circ\text{S}$ ,  $85^\circ\text{W}$  to  $6.7^\circ\text{N}$ ,  $80.3^\circ\text{W}$ .

CONRAD 8 - 12 OCT 1982 85 W - 80 W

DISSOLVED OXYGEN

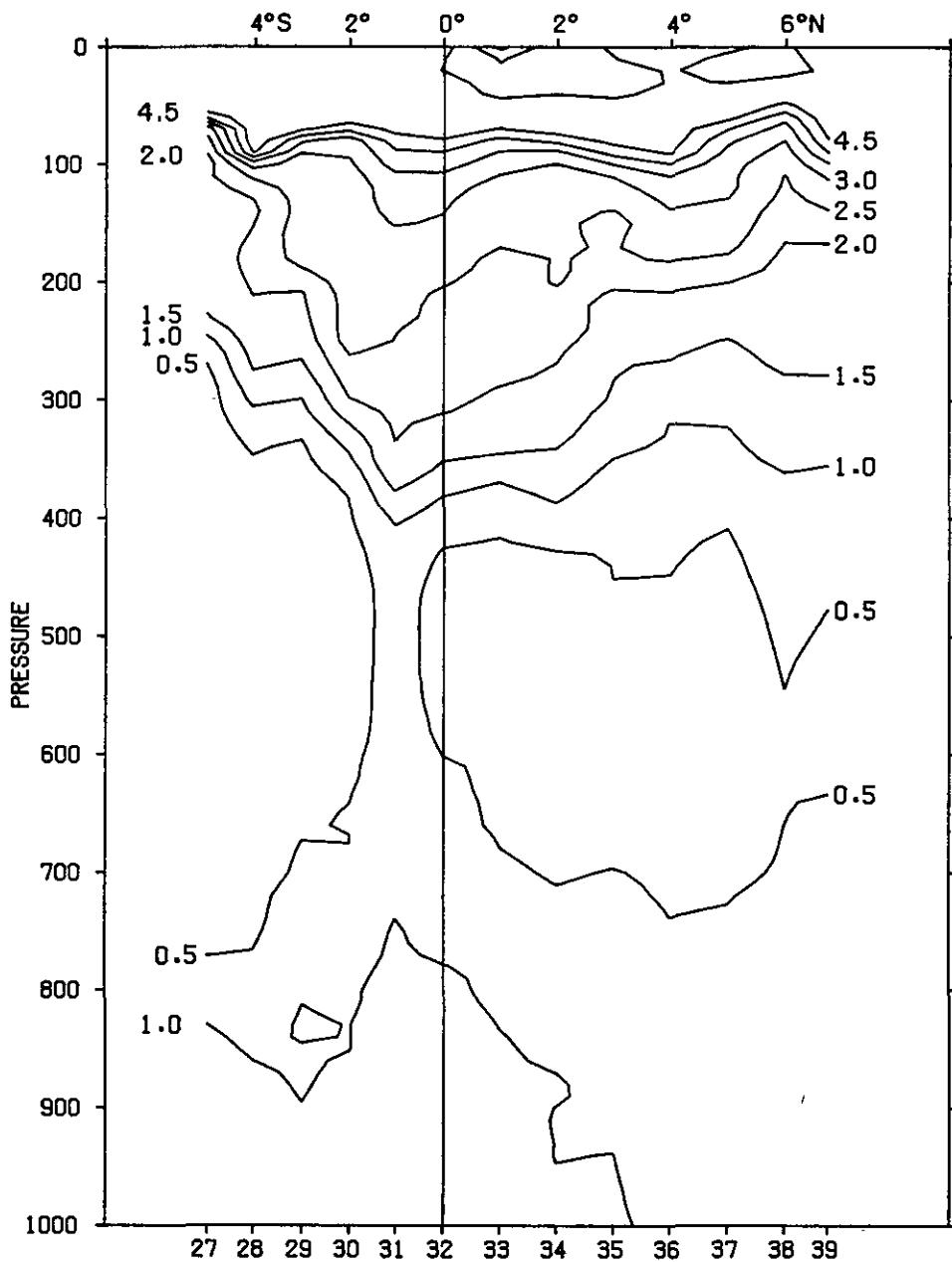


Figure 14. Oxygen (ml/l) section from 5°S, 85°W to 6.7°N, 80.3°W.



TABLE 1

Location, date, cast depth and surface temperature  
for each CTD station occupied on the 1982 CONRAD cruise.

CONRAD-82 NB CTD/O<sub>2</sub> Casts

10 Sept. - 14 Oct. 1982

<u>Cast</u>	<u>Latitude</u>	<u>Longitude</u>	<u>Date</u>	<u>Time</u>	<u>Depth</u>	<u>Surface Temp</u>
0	15°12.8'N	151°06.0'W	13 Sept 82		500	
1	5°01.6'N	138°00.2'W	18 Sept 82	1110	4000	28.5
2	4°02.1'N	138°02.7'W	18 Sept 82	2125	1000	28.6
3	3°00.2'N	137°59.6'W	19 Sept 82	1000	4000	28.1
4	2°02.0'N	138°01.2'W	19 Sept 82	1855	1000	27.9
5	1°13.8'N	138°00.9'W	20 Sept 82	0344	1000	27.9
6	0°29.3'N	138°00.4'W	20 Sept 82	1200	1000	27.5
7	0°02.5'N	137°59.2'W	20 Sept 82	2000	1000	27.5
8	0°26.8'S	137°56.9'W	20 Sept 82	0256	1000	27.4
9	1°13.8'S	137°59.0'W	21 Sept 82	1135	1000	27.2
10	1°57.6'S	138°00.4'W	21 Sept 82	1957	1000	27.1
11	3°00.2'S	137°58.7'W	22 Sept 82	0719	4000	27.5
12	3°58.9'S	138°00.1'W	22 Sept 82	1630	1500	27.5
13	5°00.0'S	138°00.1'W	23 Sept 82	0054	4100	27.5
14	0°00.2'S	129°59.1'W	25 Sept 82	1602	1000	26.9
15	0°00.0'	124°59.9'W	27 Sept 82	0225	1000	27.0
16	0°00.0'	119°06.6'W	28 Sept 82	1030	1000	26.7
17	0°00.0'	115°00.0'W	29 Sept 82	1915	1000	25.9
18	0°02.0'S	109°34.1'W	1 Oct 82	0807	1000	25.4
19	1°00.1'S	106°46.5'W	2 Oct 82	0432	1000	25.5
20	1°59.7'S	103°54.6'W	3 Oct 82	0026	1000	25.2
21	2°59.8'S	101°02.6'W	3 Oct 82	2359	3000	25.1
22	4°00.0'S	98°03.1'W	4 Oct 82	2027	1000	24.7
23	4°59.2'S	95°02.3'W	5 Oct 82	1849	3700	23.8
24	5°00.4'S	92°29.9'W	6 Oct 82	1433	1000	23.6
25	5°00.0'S	90°00.2'W	7 Oct 82	0741	1000	23.0
26	5°00.1'S	87°30.0'W	8 Oct 82	0030	1000	22.8
27	5°00.0'S	85°00.0'W	8 Oct 82	1641	2000	22.4
28	4°01.6'S	84°59.3'W	9 Oct 82	0044	1000	22.9
29	2°59.9'S	85°00.1'W	9 Oct 82	0817	1000	24.7
30	1°59.7'S	84°59.8'W	9 Oct 82	1517	1000	25.1
31	1°00.6'S	84°59.5'W	9 Oct 82	2209	1000	25.6
32	0°00.1'N	84°59.6'W	10 Oct 82	0442	1000	26.0
33	0°59.9'N	84°17.4'W	10 Oct 82	1445	1000	26.5
34	2°00.0'N	83°36.9'W	10 Oct 82	2111	1000	26.8
35	2°59.8'N	82°55.5'W	11 Oct 82	0600	1000	27.2
36	3°59.3'N	82°13.1'W	11 Oct 82	1340	1000	27.1
37	5°00.6'N	81°32.0'W	12 Oct 82	0046	1500	27.6
38	5°59.5'N	80°50.8'W	12 Oct 82	0811	1000	27.5
39	6°44.4'N	80°19.1'W	12 Oct 82	1531	3000	27.5

TABLE 2

Abbreviations and units used to describe each set of CTD measurements

SALINITY	Salinity, parts per thousand (°/oo)
TEMPERATURE	Temperature, degrees Celsius (°C)
CAST CONRAD-82-007	CTD measurement station <u>007</u> made from the research vessel CONRAD during 1982
DATE	Day, month, year
TIME	Hours and minutes, Greenwich Mean Time (GMT)
LAT	Latitude, degrees and minutes west
LONG	Longitude, degrees and minutes west
WEATHER	Present weather conditions (see Table 2)
SEA STATE	Present sea state conditions (see Table 3)
BAROMETER	Sea level atmospheric pressure, millibars (mb) over 1000 mb
WIND DIR	Wind direction, degrees True from which the wind blows
SPD	Wind speed, knots
VISIBILITY	Visibility (see Table 4)
CLOUD	Cloud type (see Table 5)
AMOUNT	Amount of cloud cover (see Table 6)
DRY	Dry air temperature, degrees Celsius
WET	Wet bulb temperature, degrees Celsius
DEPTH	Depth to the bottom, meters

TABLE 3

Weather condition code used to describe each set of CTD measurements

<u>Code</u>	<u>Weather Condition</u>
0	Clear (no cloud)
1	Partly cloudy
2	Continuous layer(s) of cloud(s)
3	Sandstorm, duststorm, or blowing snow
4	Fog, thick dust or haze
5	Drizzle
6	Rain
7	Snow, or rain and snow mixed
8	Shower(s)
9	Thunderstorms

TABLE 4  
Sea state code used to describe  
each set of CTD measurements

<u>Code</u>	<u>Height (meters)</u>	<u>Description</u>
0	0	Calm-glassy
1	0 - 0.1	Calm-rippled
2	0.1 - 0.5	Smooth-wavelet
3	0.5 - 1.25	Slight
4	1.25 - 2.5	Moderate
5	2.5 - 4	Rough
6	4 - 6	Very rough
7	6 - 9	High
8	9 - 14	Very high
9	> 14	Phenomenal

TABLE 5  
Visibility code used to describe  
each set of CTD measurements

<u>Code</u>	<u>Visibility</u>
0	< 50 meters
1	50 - 200 meters
2	200 - 500 meters
3	500 - 1,000 meters
4	1 - 2 km
5	2 - 4 km
6	4 - 10 km
7	10 - 20 km
8	20 - 50 km
9	50 km or more

TABLE 6  
Cloud Type

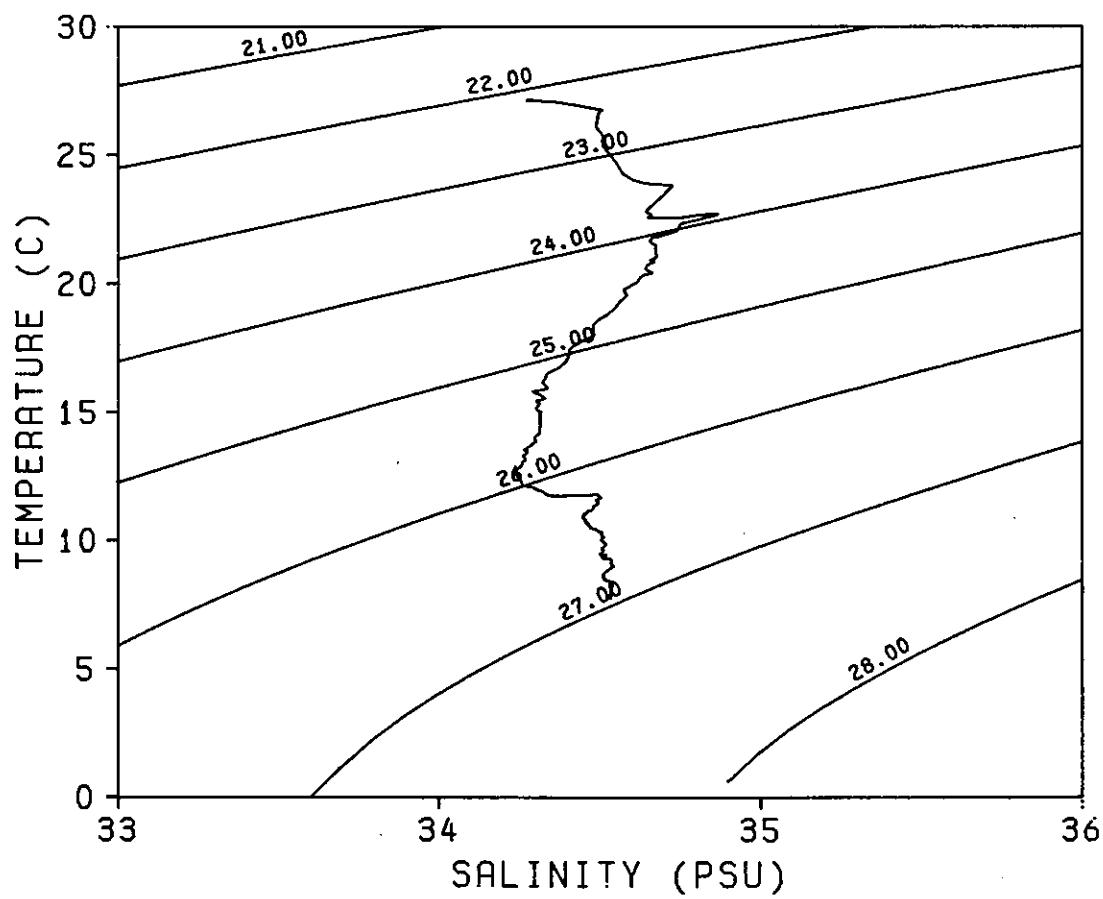
<u>Code</u>	<u>Cloud Types</u>
0	Cirrus
1	Cirrocumulus
2	Cirrostratus
3	Altocumulus
4	Altostratus
5	Nimbostratus
6	Stratocumulus
7	Stratus
8	Cumulus
9	Cumulonimbus
x	Clouds not visible

TABLE 7  
Cloud Amount

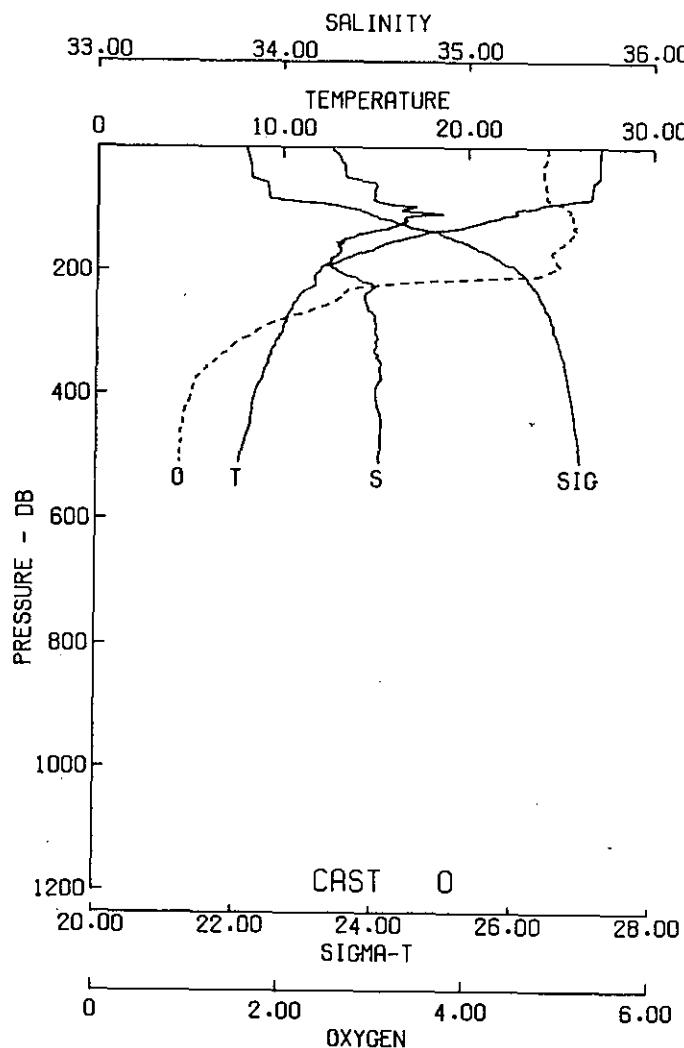
<u>Code</u>	<u>Cloud Amount</u>
0	0
1	1/10 or less but not zero
2	2/10 - 3/10
3	4/10
4	5/10
5	6/10
6	7/10 - 8/10
7	9/10
8	10/10
9	Sky obscured or not determined

DATA

CAST CONRAD-82-000 DATE 13 SEP 82 TIME GMT  
LAT 15 12.8N LONG 151 06.0W

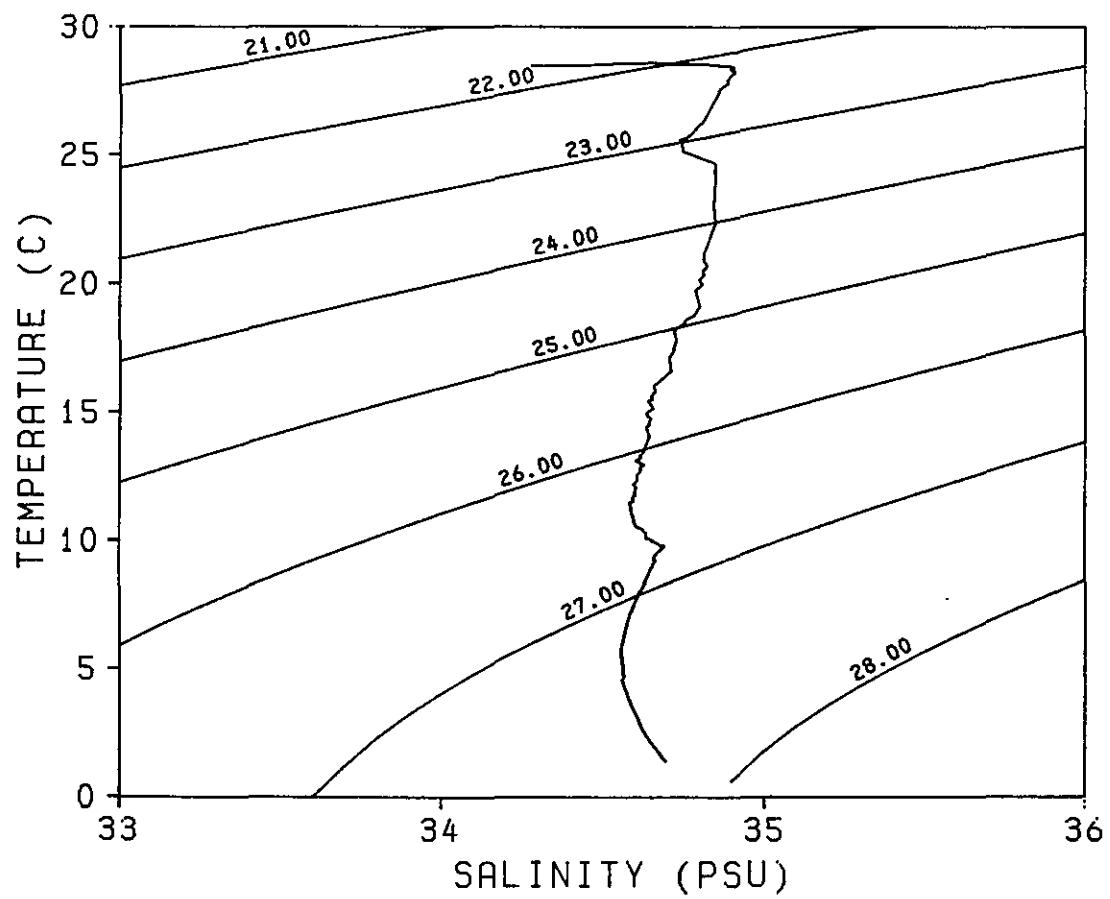


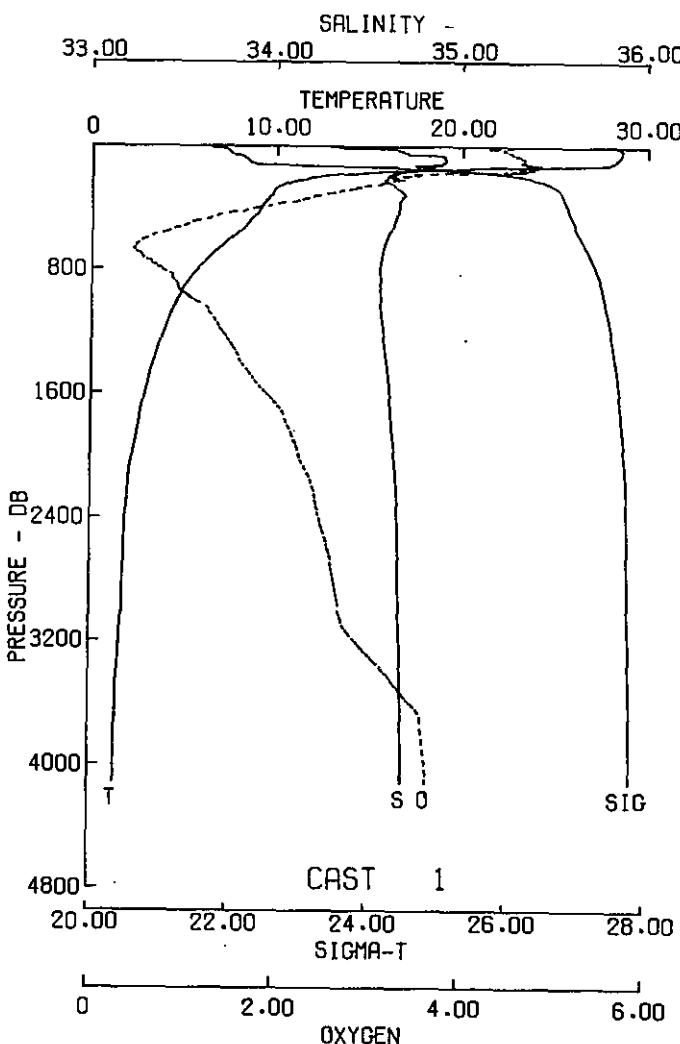
5C



CAST CONRAD-82-000		DATE 13 SEP 82	TIME	GMT
LAT 15 12.8N	LONG 151 06.0W	WEATHER	SEA STATE	
BAROMETER 12	WIND DIR	T SPD	KT	VISIBILITY
CLOUD	AMOUNT	DRY 27.	WET	DEPTH M
0.	27.136	34.272	4.86	22.145 0.000
10.	27.120	34.291	4.85	22.165 .057
20.	27.090	34.315	4.84	22.193 .114
30.	27.078	34.336	4.80	22.212 .170
40.	27.078	34.337	4.81	22.213 .226
50.	27.054	34.358	4.81	22.236 .283
60.	26.730	34.506	4.83	22.451 .338
70.	26.669	34.497	4.85	22.463 .392
80.	26.623	34.495	4.85	22.476 .446
90.	24.677	34.551	4.97	23.118 .498
100.	22.962	34.656	5.10	23.702 .543
110.	22.309	34.750	5.11	23.959 .584
120.	20.895	34.655	5.16	24.278 .622
130.	19.768	34.572	5.13	24.516 .658
140.	17.638	34.428	5.14	24.940 .691
150.	16.329	34.331	5.09	25.175 .720
160.	15.276	34.310	4.98	25.397 .747
170.	14.387	34.310	4.91	25.591 .773
180.	13.488	34.274	4.94	25.750 .796
190.	12.683	34.233	4.98	25.880 .819
200.	12.030	34.296	4.88	26.055 .839
250.	10.783	34.456	2.58	26.410 .930
300.	10.026	34.503	1.72	26.579 1.009
350.	9.247	34.535	1.24	26.733 1.082
400.	8.561	34.511	1.03	26.824 1.149
450.	8.309	34.540	.92	26.886 1.213
500.	7.778	34.530	.90	26.958 1.274
510.	7.717	34.532	.92	26.968

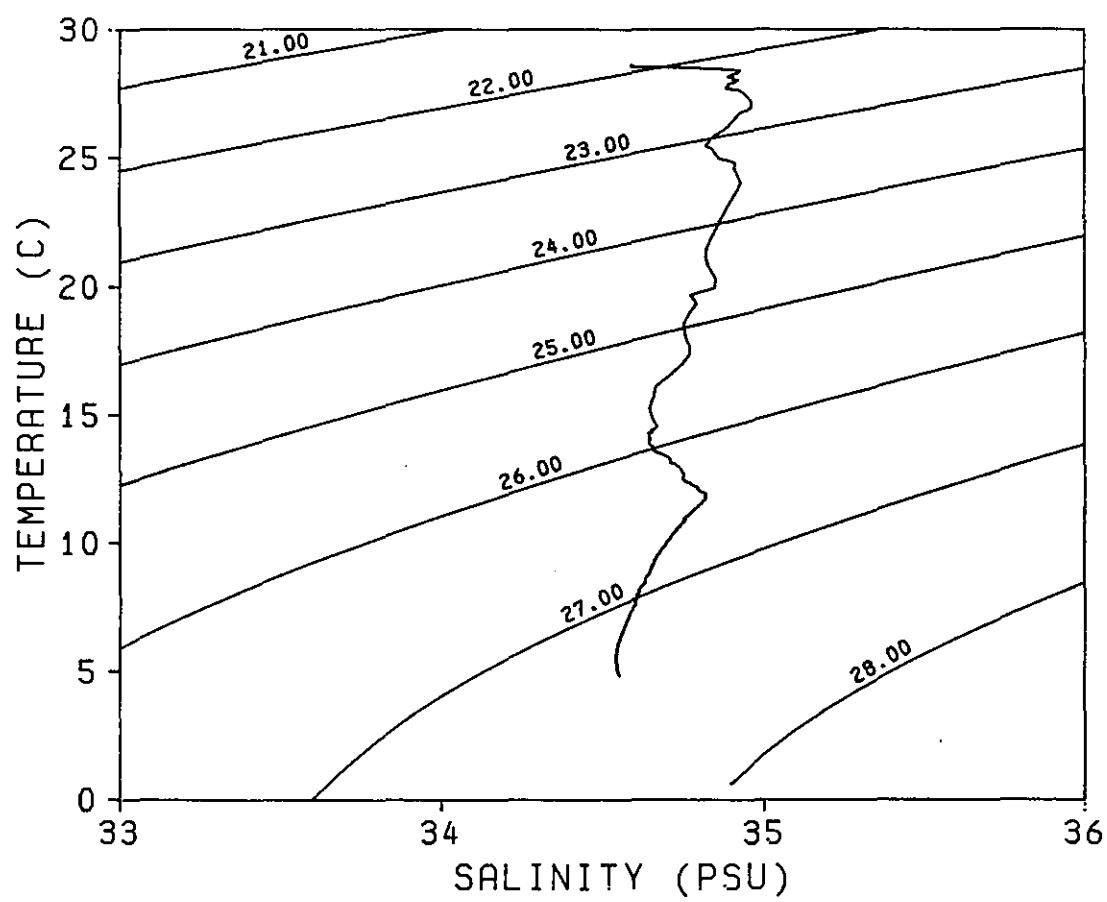
CAST CONRAD-82-001 DATE 18 SEP 82 TIME 1110 GMT  
LAT 05 01.6N LONG 138 00.2W

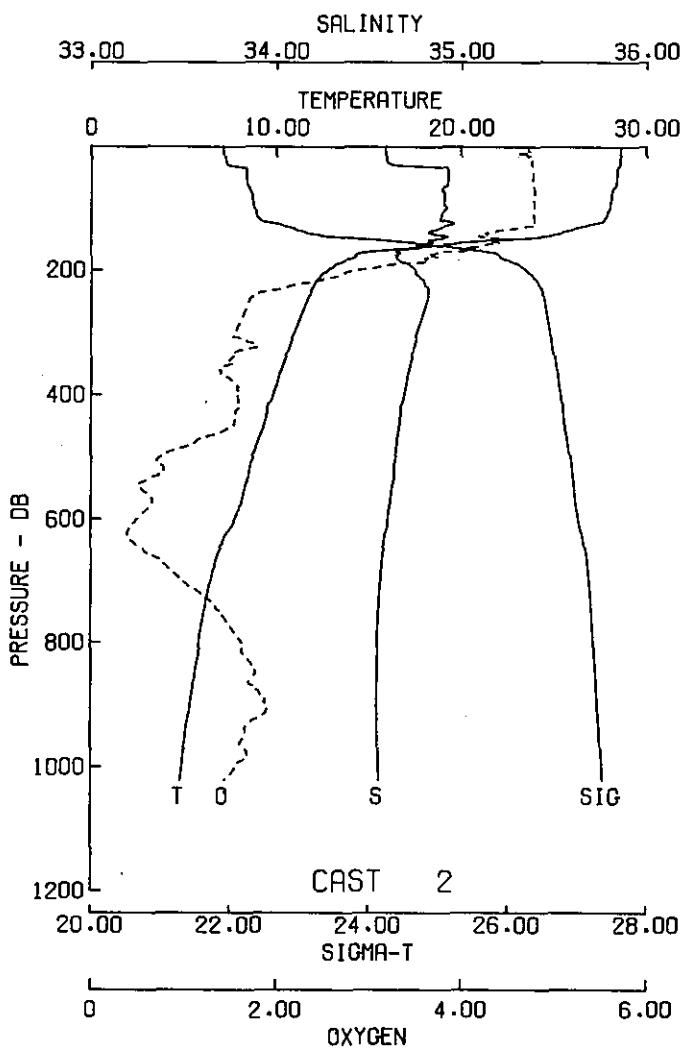




CAST	CONRAD-82-001	DATE	18 SEP 82	TIME	1110 GMT
LAT	05 01.6N	LONG	138 00.2W	WEATHER	SEA STATE
BAROMETER	12	WIND	DIR	T SPD	KT
CLOUD	AMOUNT	DRY	WET	VISIBILITY	DEPTH
0.	28.469	34.283	4.54	21.720	0.00
10.	28.484	34.330	4.30	21.751	.06
20.	28.596	34.638	4.40	21.945	.12
30.	28.587	34.671	4.44	21.973	.180
40.	28.560	34.687	4.53	21.993	.238
50.	28.554	34.705	4.54	22.009	.297
60.	28.482	34.861	4.57	22.150	.355
70.	28.435	34.904	4.60	22.198	.471
80.	28.312	34.898	4.66	22.234	.488
90.	28.280	34.910	4.65	22.253	.524
100.	28.215	34.907	4.66	22.272	.570
110.	28.013	34.889	4.71	22.325	.636
120.	27.832	34.888	4.71	22.384	.692
130.	24.861	34.807	4.77	23.256	.742
140.	20.693	34.822	4.78	24.459	.773
150.	18.734	34.782	4.77	24.939	.817
160.	17.372	34.718	4.55	25.227	.846
170.	15.485	34.656	4.13	25.617	.872
180.	14.393	34.634	3.47	25.839	.895
190.	13.088	34.602	3.54	26.085	.915
200.	12.371	34.605	3.23	26.229	.974
250.	10.458	34.619	3.14	26.594	1.017
300.	9.823	34.676	2.67	26.748	1.048
350.	9.507	34.673	2.26	26.796	1.156
400.	9.179	34.663	1.80	26.845	1.221
450.	8.856	34.649	1.38	26.886	1.287
500.	8.442	34.634	1.06	26.939	1.347
550.	8.094	34.620	.86	26.982	1.407
600.	7.539	34.599	.60	27.047	1.467
650.	7.092	34.583	.47	27.098	1.527
700.	6.575	34.569	.55	27.158	1.577
750.	6.168	34.565	.66	27.209	1.622
800.	5.774	34.555	.77	27.253	1.669
850.	5.412	34.555	.88	27.298	1.717
900.	5.128	34.562	.93	27.334	1.758
950.	4.908	34.563	.99	27.361	1.800
1000.	4.696	34.566	1.11	27.387	1.841
1050.	4.542	34.555	1.75	27.574	2.197
1100.	4.392	34.541	2.26	27.682	2.481
1150.	4.244	34.664	2.53	27.733	2.726
1200.	4.164	34.672	2.69	27.749	2.967
1250.	4.118	34.686	3.34	27.778	3.189
1300.	4.089	34.695	3.66	27.795	

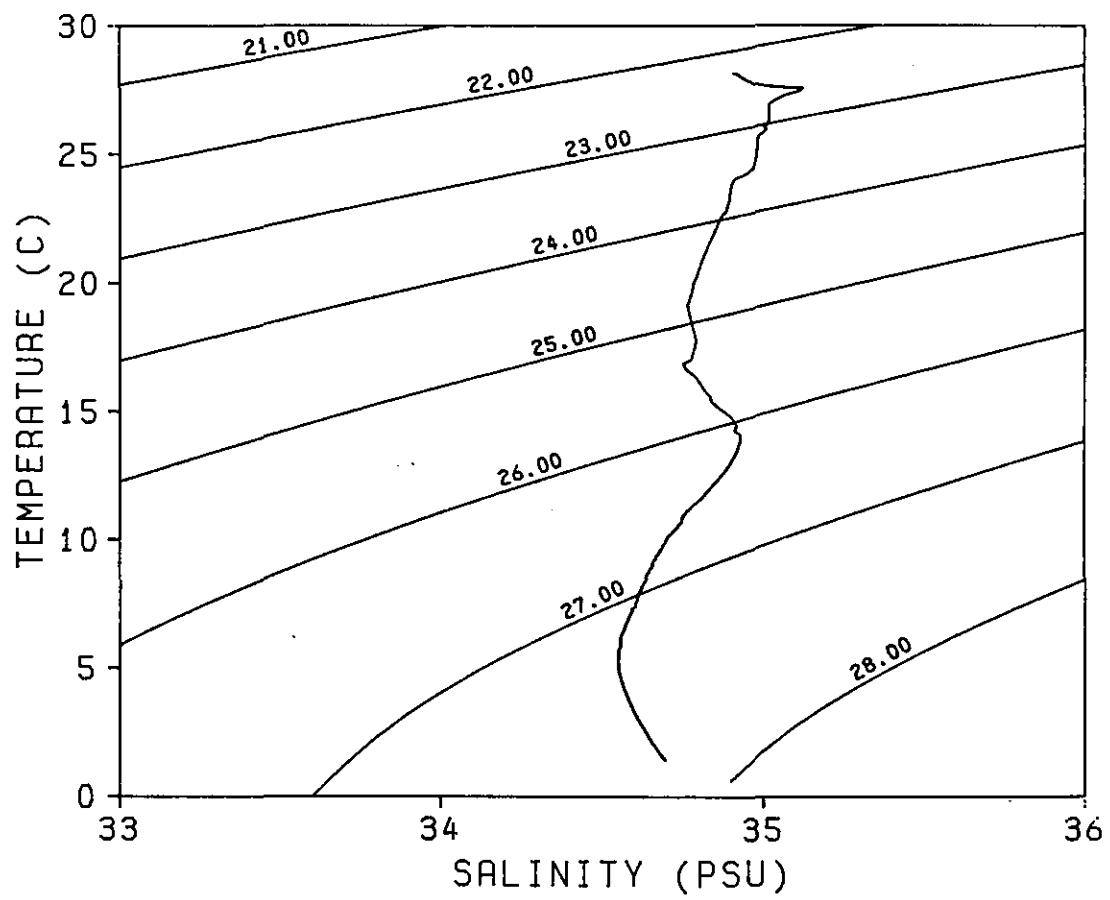
CAST CONRAD-82-002 DATE 18 SEP 82 TIME 2125 GMT  
LAT 04 02.1N LONG 138 02.7W

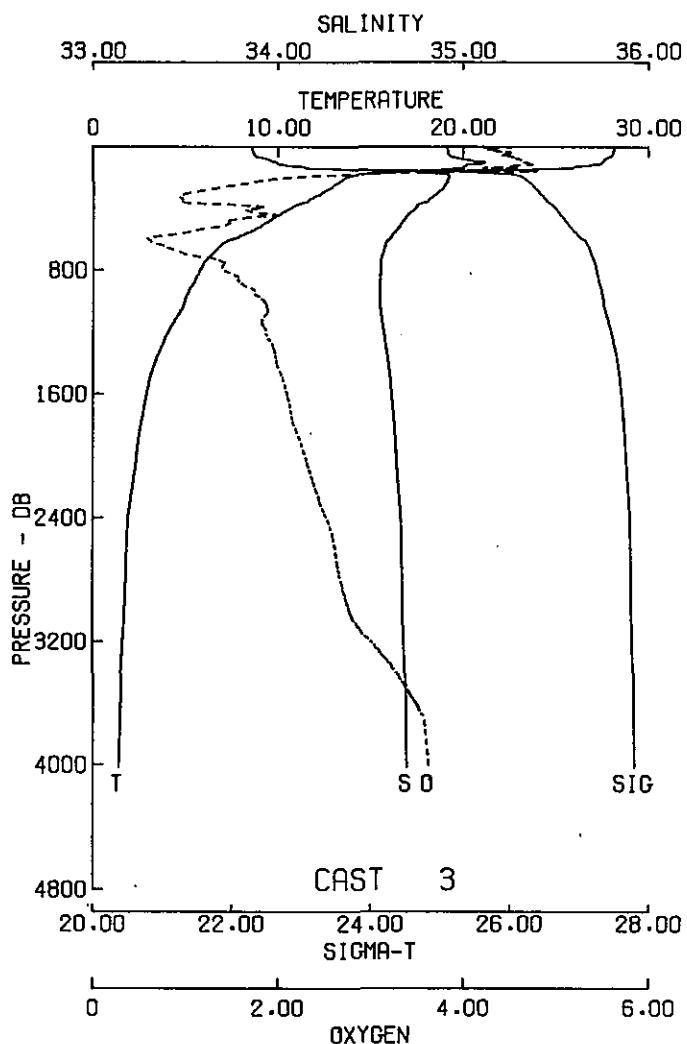




CLOUD	CONRAD-82-002	DATE 18 SEP 82	TIME 2125 GMT
PRES (DB)	LAT 04 02.1N LONG 138 02.7W	WEATHER	SEA STATE
AMOUNT	WIND DIR	T SPD KT	VISIBILITY
0.	34.591	4.72	21.905
10.	34.594	4.76	21.907
20.	34.592	4.76	21.931
30.	34.536	4.76	21.968
40.	34.928	4.76	22.233
50.	34.928	4.77	22.235
60.	34.925	4.77	22.242
70.	34.890	4.79	22.282
80.	34.909	4.79	22.315
90.	34.906	4.79	22.327
100.	34.924	4.78	22.348
110.	34.895	4.77	22.380
120.	34.892	4.79	22.440
130.	34.900	4.65	22.824
140.	34.823	4.30	23.097
150.	34.868	4.41	23.965
160.	34.773	4.27	24.872
170.	34.647	4.55	25.661
180.	34.648	3.65	25.889
190.	34.715	3.28	26.144
200.	34.748	2.87	26.262
210.	34.814	1.71	26.535
220.	34.760	1.56	26.609
230.	34.724	1.51	26.695
240.	34.692	1.58	26.759
250.	34.665	1.54	26.822
260.	34.645	0.75	26.903
270.	34.624	0.52	26.954
280.	34.604	0.50	27.016
290.	34.579	0.57	27.117
300.	34.564	0.99	27.167
310.	34.554	1.39	27.206
320.	34.549	1.64	27.234
330.	34.546	1.78	27.263
340.	34.545	1.89	27.291
350.	34.549	1.67	27.323
360.	34.552	1.55	27.352
370.	34.555	1.44	27.386

CAST CONRAD-82-003 DATE 19 SEP 82 TIME 1000 GMT  
LAT 03 00.2N LONG 137 59.6W

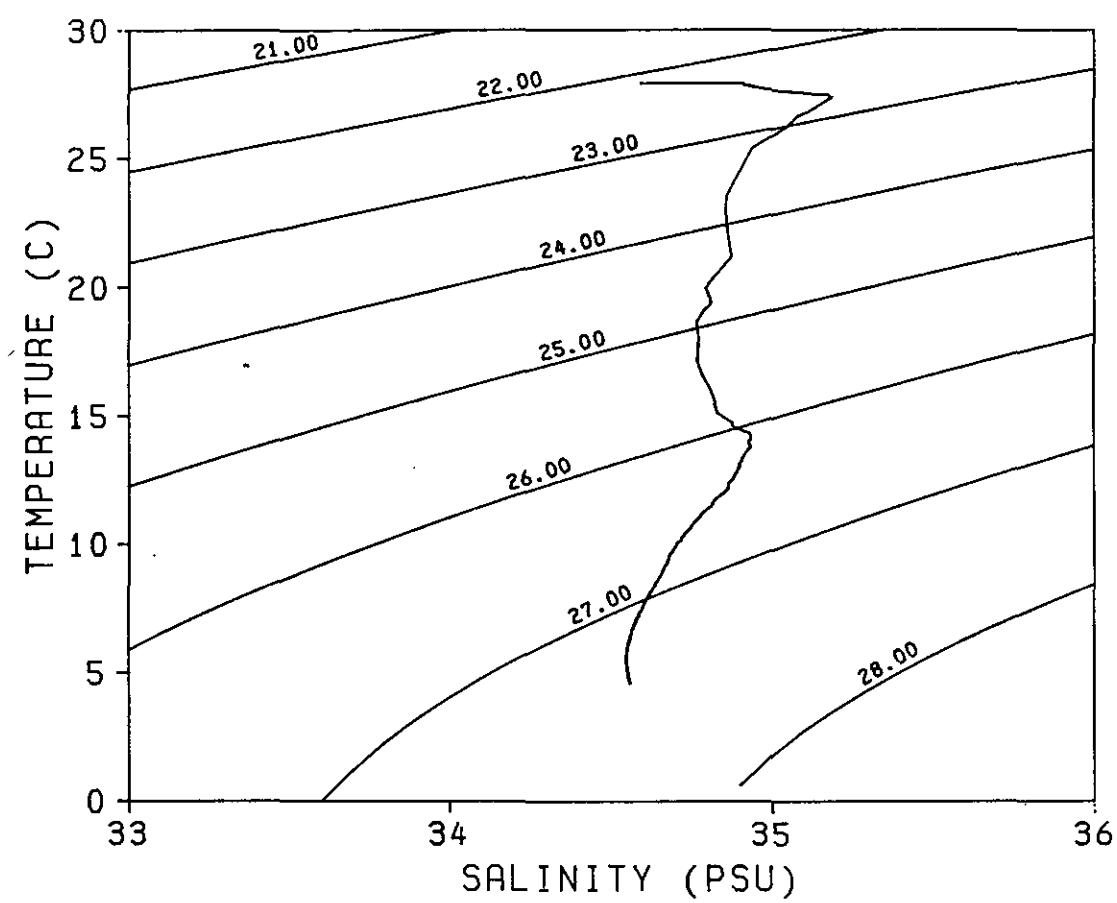




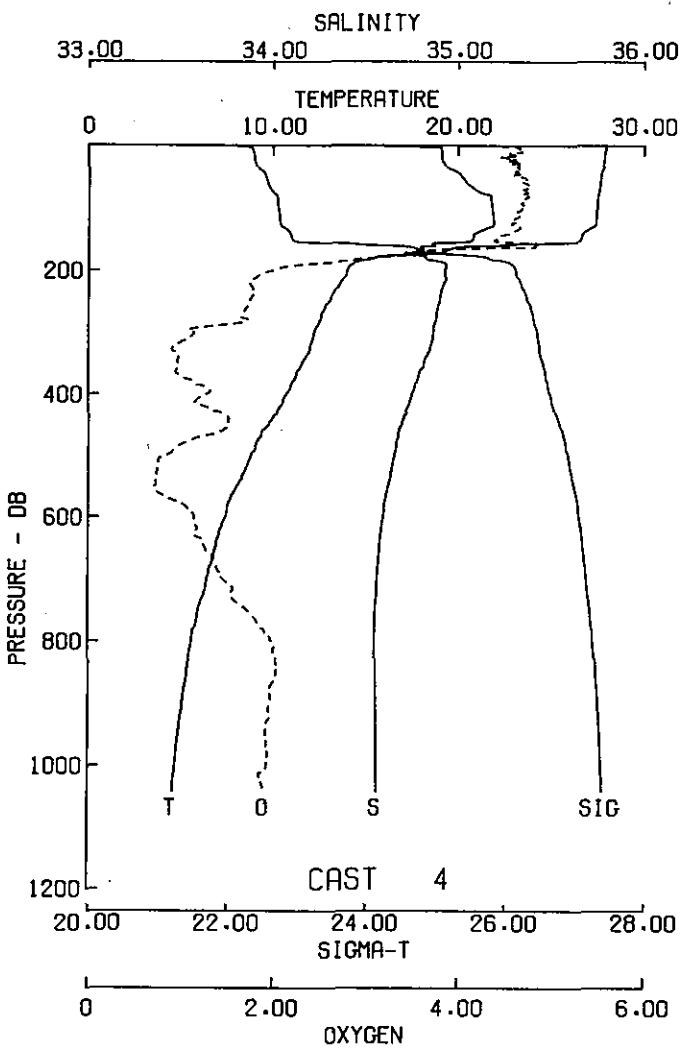
CAST CONRAD-82-003 DATE 19 SEP 82 TIME 1800 GMT  
 LAT 03 00.2N LONG 137 59.6W WEATHER SEA STATE  
 BAROMETER 12 WIND DIR 110 T SPD 04 KT VISIBILITY  
 CLOUD AMOUNT DRY WET DEPTH 4275 M

PRES (DB)	TEMP (C)	SAL (PSU)	OXY (ML/L)	SIG-T	DELTA-D (DYN-M)
0.	28.129	34.916	4.54	22.308	0.008
100.	28.143	34.913	4.22	22.301	0.056
200.	28.147	34.919	4.30	22.304	0.111
300.	28.131	34.920	4.34	22.310	0.166
400.	28.092	34.920	4.49	22.323	0.222
500.	28.076	34.923	4.48	22.330	0.277
600.	28.035	34.927	4.49	22.347	0.332
700.	27.986	34.946	4.55	22.410	0.388
800.	27.668	34.989	4.59	22.513	0.443
900.	27.629	35.035	4.53	22.566	0.495
1000.	27.662	35.119	4.68	22.645	0.548
1100.	27.464	35.115	4.71	22.674	0.601
1200.	26.909	35.016	4.71	22.777	0.653
1300.	26.120	35.010	4.57	23.022	0.703
1400.	25.944	35.007	4.23	23.074	0.752
1500.	23.763	34.901	4.32	23.653	0.798
1600.	19.663	34.779	4.61	24.700	0.836
1700.	16.222	34.799	3.64	25.559	0.864
1800.	14.565	34.913	2.98	26.716	0.886
1900.	13.965	34.929	2.47	26.157	0.906
2000.	13.756	34.927	2.17	26.197	0.925
2100.	13.000	34.901	1.55	26.332	1.016
2200.	12.486	34.882	1.04	26.429	1.103
2300.	11.644	34.810	.97	26.527	1.184
2400.	10.716	34.748	1.81	26.649	1.262
2500.	9.948	34.697	1.87	26.744	1.334
2600.	9.258	34.665	1.48	26.833	1.402
2700.	8.514	34.636	1.25	26.925	1.467
2800.	7.534	34.602	.59	27.350	1.526
2900.	6.422	34.578	1.78	27.134	1.574
3000.	6.013	34.565	1.01	27.174	1.630
3100.	5.507	34.555	1.41	27.220	1.670
3200.	5.057	34.553	1.42	27.247	1.727
3300.	5.062	34.551	1.50	27.273	1.773
3400.	5.159	34.551	1.64	27.298	1.818
3500.	4.961	34.553	1.75	27.322	1.862
3600.	3.025	34.607	1.85	27.347	1.905
3700.	2.372	34.641	2.05	27.585	2.267
3800.	1.877	34.667	2.30	27.675	2.554
3900.	1.738	34.676	2.58	27.736	2.802
4000.	1.511	34.689	2.77	27.754	3.035
4018.	1.410	34.696	3.37	27.782	3.259
			3.63	27.794	

CAST CONRAD-82-004 DATE 19 SEP 82 TIME 1857 GMT  
LAT 02 02.0N LONG 138 01.2W



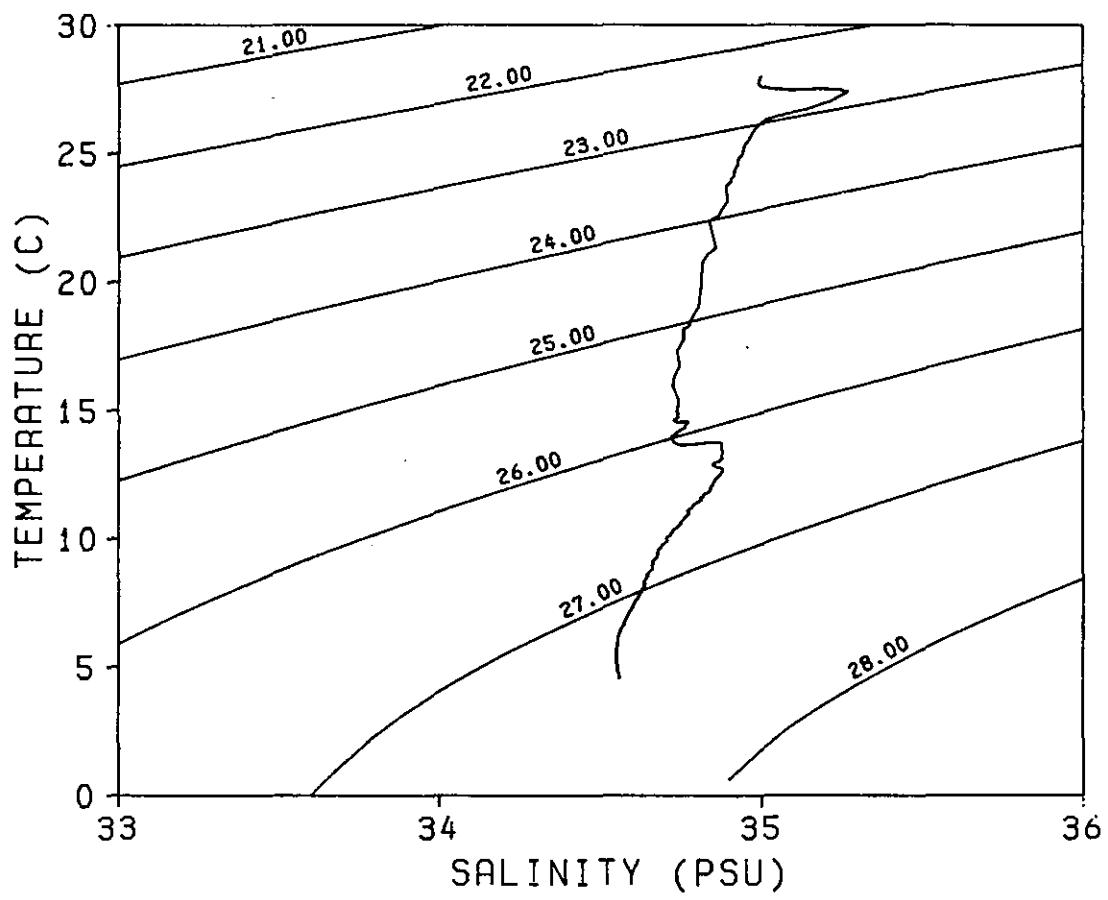
E4

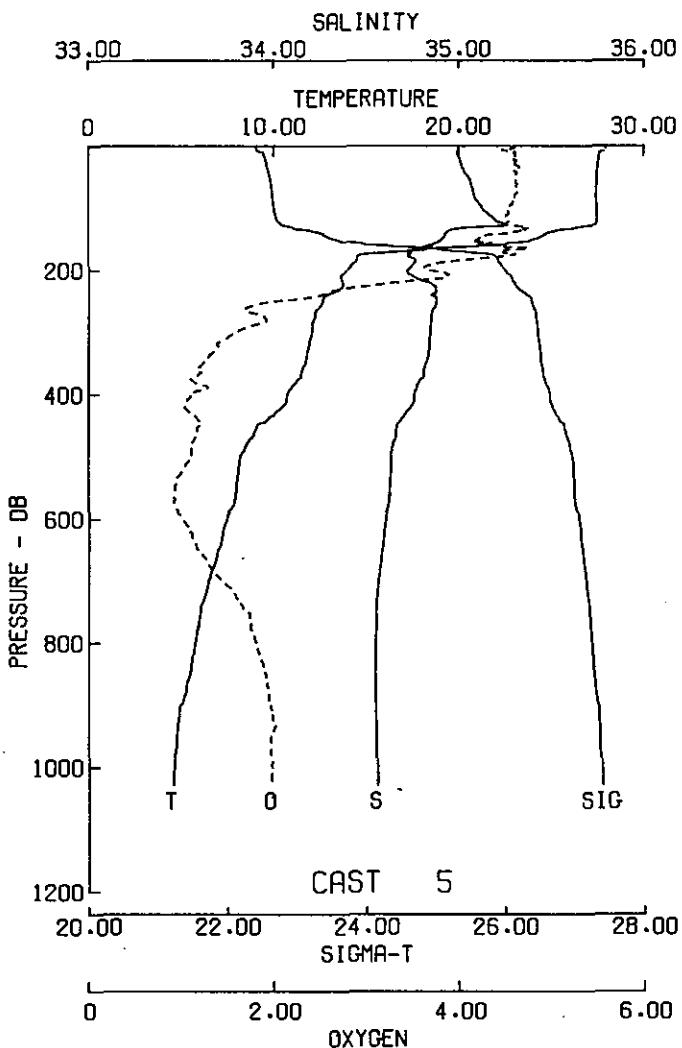


CAST CONRAD-82-004 DATE 19 SEP 82 TIME 1857 GMT  
 LAT 02° 02' N LONG 138° 01' 2W WEATHER SEA STATE 3  
 BAROMETER 13 WIND DIR 020 T SPD 05 KT VISIBILITY 9  
 CLOUD AMOUNT DRY WET DEPTH 4240 M

PRES (DB)	TEMP (C)	SAL (PSU)	OXY (ML/L)	SIG-T	DELTA-D (DYN-M)
0.	27.528	34.594	4.47	22.132	0.000
10.	27.591	34.909	4.67	22.380	.555
20.	27.855	34.911	4.49	22.394	11.6
30.	27.821	34.925	4.59	22.415	16.5
40.	27.704	34.968	4.68	22.486	21.9
50.	27.619	34.915	4.64	22.548	27.2
60.	27.589	34.941	4.70	22.578	32.6
70.	27.560	34.982	4.74	22.617	37.8
80.	27.485	34.955	4.71	22.706	43.1
90.	27.450	34.974	4.71	22.723	48.3
100.	27.434	34.978	4.67	22.731	53.4
110.	27.395	34.983	4.60	22.747	58.6
120.	27.377	34.987	4.60	22.756	63.7
130.	27.396	34.979	4.53	22.776	68.9
140.	26.781	34.994	4.57	22.903	74.9
150.	26.566	34.975	4.42	22.931	79.0
160.	22.328	34.860	4.78	24.037	83.6
170.	19.364	34.803	3.50	24.826	87.6
180.	14.462	34.820	3.11	25.742	89.7
190.	14.281	34.930	2.34	26.091	91.9
200.	13.984	34.926	1.99	26.150	93.8
210.	13.016	34.898	1.75	26.329	1.031
220.	12.016	34.863	1.14	26.463	1.116
230.	11.541	34.814	.97	26.549	1.197
240.	10.713	34.749	1.26	26.650	1.274
250.	9.707	34.691	1.49	26.779	1.346
260.	8.772	34.653	.83	26.902	1.411
270.	8.024	34.620	.72	26.992	1.472
280.	7.415	34.595	1.15	27.061	1.528
290.	6.867	34.575	1.27	27.123	1.582
300.	6.412	34.562	1.46	27.174	1.633
310.	6.048	34.554	1.73	27.228	1.682
320.	5.621	34.551	2.00	27.266	1.729
330.	5.311	34.551	2.03	27.304	1.774
340.	5.073	34.554	1.95	27.335	1.817
350.	4.866	34.557	1.92	27.361	1.859
360.	4.713	34.560	1.93	27.382	1.900
370.	4.580	34.561	1.91	27.397	

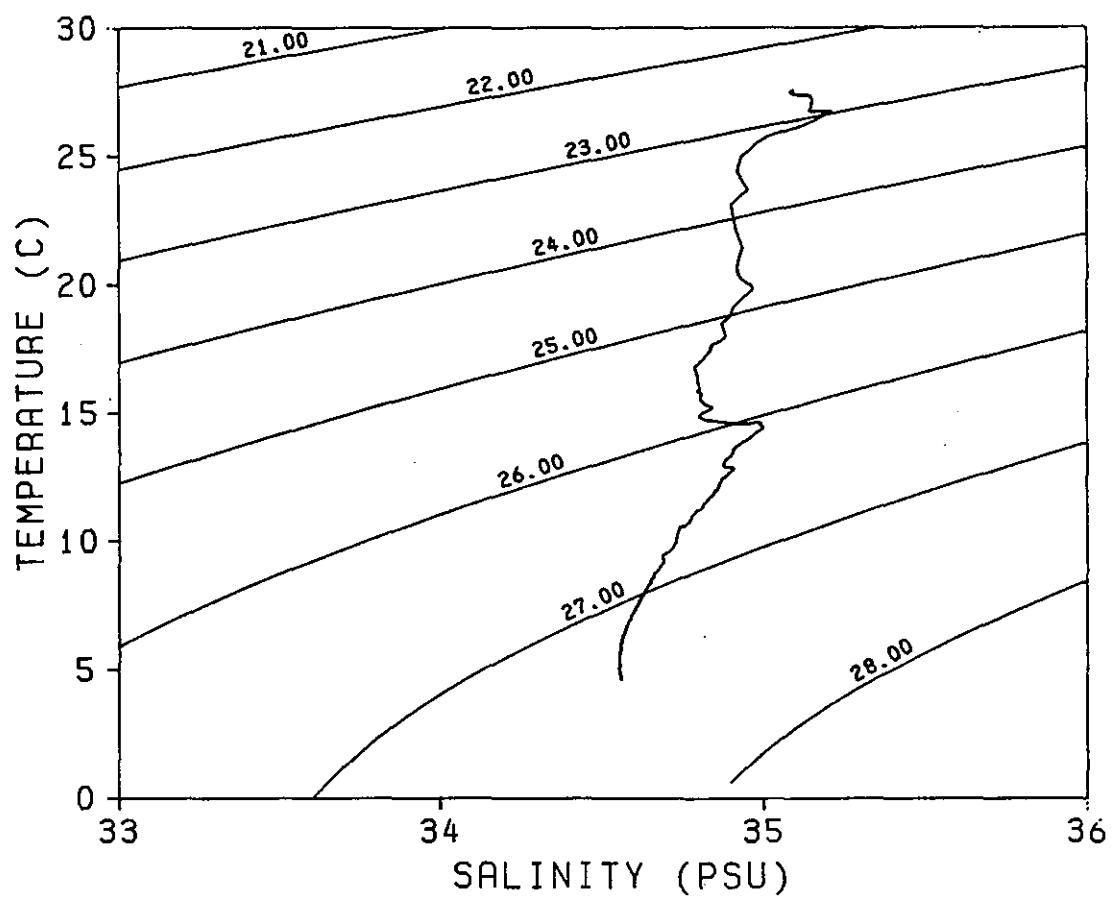
CAST CONRAD-82-005 DATE 20 SEP 82 TIME 0344 GMT  
LAT 01 13.5N LONG 138 00.9W

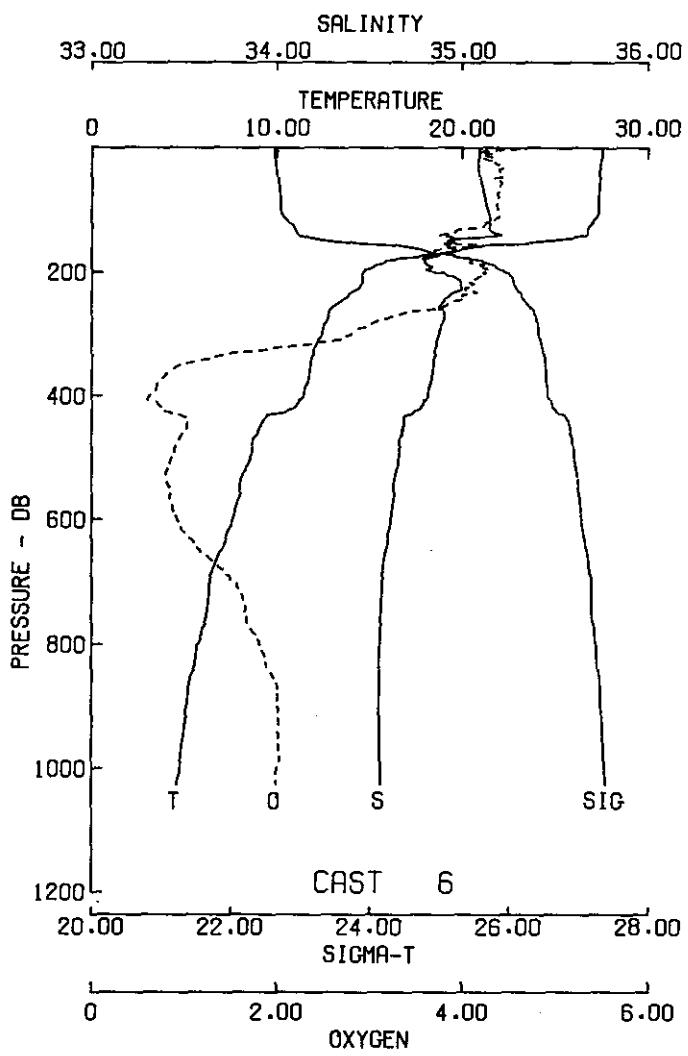




CLOUD DEPTH	CAST	CCNRAD-82-005	DATE	20 SEP 82	WEATHER	TIME	0344 GMZ	SEA STATE	VISIBILITY	M	DEPTH
0											
12		27.974		35.001		4.61		2	5.22		0.000
24		27.669		34.993		4.61		2	5.16		0.054
36		27.573		34.906		4.58		2	5.16		0.107
48		27.532		34.818		4.62		2	5.11		0.160
60		27.497		34.833		4.62		2	5.11		0.213
72		27.475		34.856		4.62		2	5.11		0.267
84		27.460		34.869		4.63		2	5.05		0.320
96		27.447		34.880		4.63		2	5.05		0.374
108		27.443		34.887		4.61		2	5.09		0.428
120		27.461		34.908		4.59		2	5.09		0.481
132		27.462		34.912		4.59		2	5.09		0.534
144		27.482		35.131		4.56		2	5.09		0.587
156		27.500		35.164		4.54		2	5.09		0.640
168		27.508		35.207		4.53		2	5.09		0.693
180		26.686		35.137		4.75		2	5.04		0.681
192		24.812		34.930		4.55		2	5.04		0.731
204		24.081		34.915		4.23		2	5.11		0.781
216		21.327		34.861		4.49		2	5.11		0.834
228		16.715		34.747		4.55		2	5.09		0.887
240		14.536		34.749		4.33		2	5.09		0.940
252		14.311		34.761		3.76		2	5.04		0.993
264		13.442		34.721		3.66		2	5.04		1.044
276		12.657		34.881		2.93		2	5.04		1.097
288		12.072		34.847		1.61		2	5.04		1.150
300		11.726		34.824		1.23		2	5.22		1.173
312		10.758		34.760		1.14		2	5.51		1.225
324		9.118		34.666		1.20		2	8.57		1.322
336		8.221		34.637		1.11		2	9.75		1.384
348		8.009		34.629		.94		2	9.01		1.443
360		7.462		34.605		1.02		2	9.3		1.504
372		6.987		34.585		1.19		2	11.4		1.554
384		6.485		34.564		1.44		2	16.4		1.613
396		6.361		34.552		1.73		2	21.2		1.655
408		5.772		34.551		1.81		2	24.8		1.704
420		5.489		34.549		1.93		2	28.1		1.749
432		4.983		34.554		1.97		2	34.5		1.792
444		4.790		34.555		1.97		2	36.8		1.834
456		4.610		34.558		1.98		2	39.1		1.875
468		4.548		34.559		1.98		2	39.8		

CAST CONRAD-82-006 DATE 20 SEP 82 TIME 1200 GMT  
LAT 00 29.3N LONG 138 00.4W

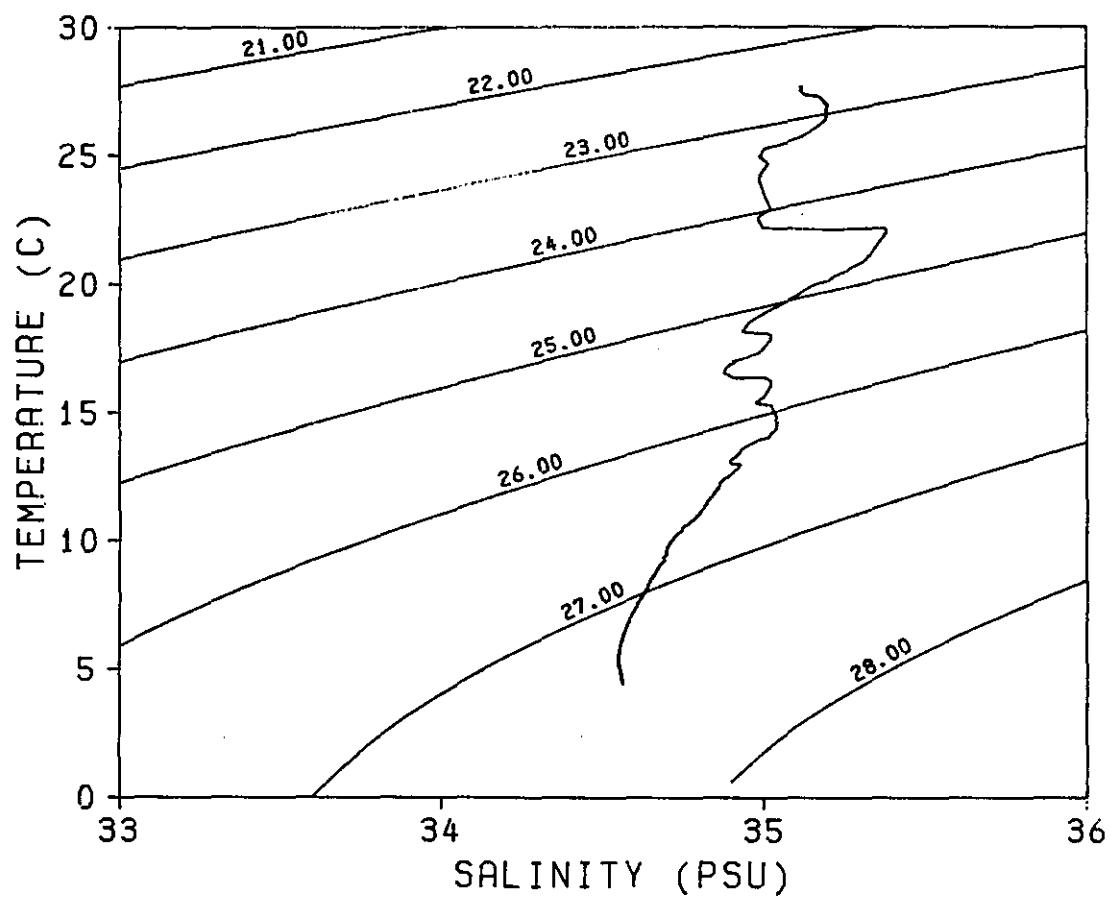


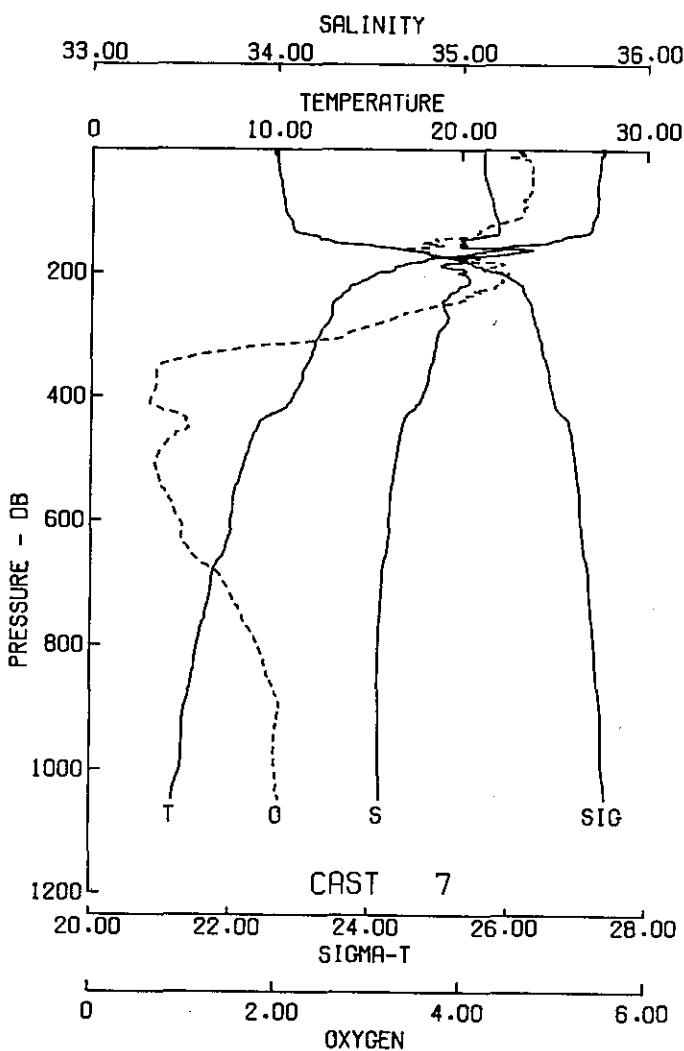


CAST CCONRAD-82-006 DATE 20 SEP 82 TIME 1200 GMT  
 LAT 00 29°N LONG 138 00.4W WEATHFR SEA STATE  
 BAROMETER 11 WIND DIR 120° T SPD 03 KT VISIBILITY  
 CLOUD AMOUNT DRY WET DEPTH 4380 M

PRES (DB)	TEMP (°C)	SAL (PSU)	OXY (ML/L)	SIG-T	DELTA-D (DYN-M)
0.	27.541	35.094	4.57	22.633	0.000
10.	27.551	35.092	4.24	22.628	.052
20.	27.477	35.092	4.28	22.648	.105
30.	27.449	35.097	4.47	22.658	.157
40.	27.427	35.091	4.43	22.668	.208
50.	27.403	35.091	4.34	22.681	.261
60.	27.378	35.096	4.41	22.698	.314
70.	27.365	35.115	4.41	22.706	.367
80.	27.351	35.123	4.39	22.716	.417
90.	27.348	35.130	4.38	22.722	.460
100.	27.355	35.130	4.36	22.727	.520
110.	27.266	35.155	4.28	22.768	.573
120.	27.010	35.150	4.28	22.846	.623
130.	26.753	35.144	4.26	22.923	.673
140.	26.740	35.213	4.26	22.979	.723
150.	24.357	34.912	4.21	23.492	.773
160.	20.460	34.912	4.21	24.595	.820
170.	18.749	34.892	4.21	25.024	.841
180.	16.192	34.797	4.10	25.565	.869
190.	15.238	34.835	4.10	25.810	.892
200.	14.667	34.851	4.21	25.947	.914
210.	13.300	34.895	3.86	26.269	1.014
220.	12.422	34.874	2.81	26.427	1.059
230.	11.785	34.843	0.95	26.526	1.181
240.	11.450	34.817	1.63	26.560	1.260
250.	9.081	34.684	1.02	26.877	1.332
260.	8.551	34.655	0.86	26.938	1.394
270.	8.007	34.631	0.85	27.003	1.453
280.	7.601	34.613	0.93	27.049	1.510
290.	6.947	34.587	1.17	27.121	1.565
300.	6.367	34.565	1.53	27.183	1.616
310.	6.232	34.560	1.66	27.196	1.665
320.	5.711	34.554	1.82	27.257	1.714
330.	5.331	34.553	1.94	27.303	1.759
340.	5.144	34.552	2.01	27.325	1.802
350.	4.948	34.554	2.00	27.349	1.845
360.	4.759	34.557	2.00	27.374	1.886
370.	4.580	34.560	2.00	27.396	

CAST CONRAD-82-007 DATE 20 SEP 82 TIME 2000 GMT  
LAT 00 02.5N LONG 137 59.2W

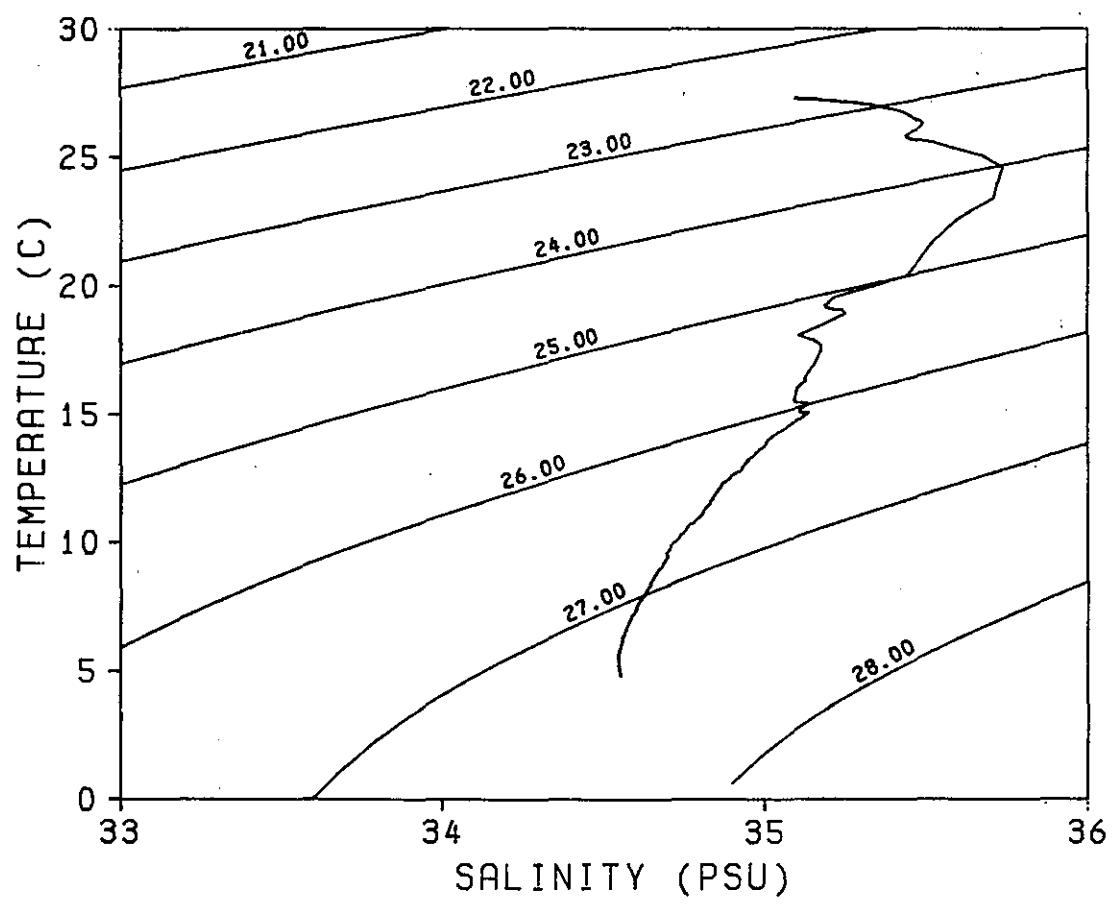


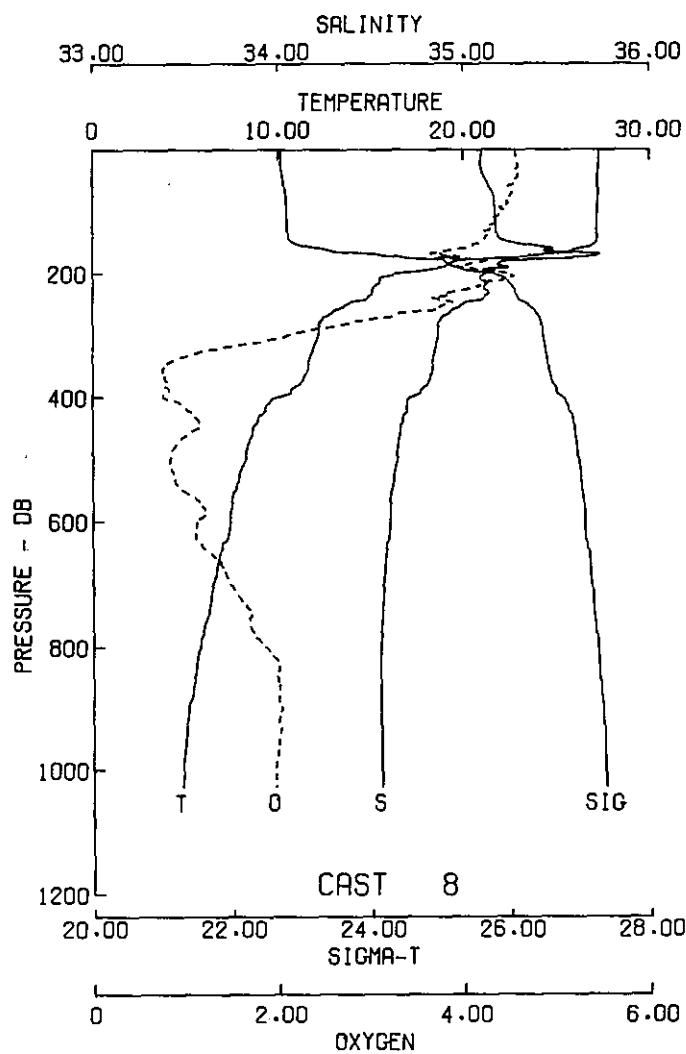


CAST CONRAD-82-007 DATE 20 SEP 82 TIME 2000 GMT  
 LAT 00 C2.5N LONG 137 59.2W WEATHER SEA STATE  
 BAROMETER VIND DIR 040 T SPD 04 KT VISIBILITY  
 CLOUD AMOUNT DRY WET DEPTH M

PRES (DB)	TEMP (C)	SAL (PSU)	OXY (ML/L)	SIG-T	DELTA-T (DYN-M)
0.	27.631	35.121	4.61	22.624	0.000
10.	27.504	35.116	4.68	22.661	0.115
20.	27.467	35.117	4.75	22.674	0.134
30.	27.447	35.110	4.76	22.682	0.153
40.	27.413	35.120	4.77	22.694	0.172
50.	27.345	35.130	4.76	22.723	0.209
60.	27.328	35.130	4.76	22.735	0.311
70.	27.316	35.150	4.75	22.743	0.363
80.	27.305	35.157	4.66	22.757	0.414
90.	27.294	35.163	4.71	22.765	0.466
100.	27.272	35.171	4.66	22.778	0.517
110.	27.143	35.193	4.63	22.829	0.568
120.	27.011	35.198	4.39	22.878	0.610
130.	25.960	35.125	4.21	22.898	0.669
140.	25.737	35.012	4.30	23.228	0.718
150.	24.704	35.012	3.56	23.459	0.764
160.	22.987	35.202	3.45	24.365	0.809
170.	20.301	35.222	3.50	24.868	0.836
180.	17.960	35.028	4.00	25.320	0.868
190.	16.348	34.905	4.35	25.611	0.894
200.	15.399	34.977	4.51	25.885	0.917
210.	13.802	34.897	3.86	26.338	1.013
220.	12.334	34.871	2.75	26.442	1.099
230.	11.567	34.830	2.74	26.557	1.180
240.	10.982	34.787	1.64	26.650	1.257
250.	8.961	34.676	1.06	26.891	1.326
260.	8.317	34.640	0.70	26.930	1.387
270.	7.765	34.521	0.79	27.031	1.445
280.	7.543	34.611	0.96	27.056	1.501
290.	7.190	34.597	1.07	27.095	1.556
300.	6.670	34.571	1.44	27.171	1.608
310.	6.485	34.562	1.63	27.206	1.658
320.	6.174	34.555	1.80	27.254	1.705
330.	5.748	34.552	1.91	27.282	1.751
340.	5.499	34.554	2.04	27.338	1.837
350.	5.348	34.555	1.99	27.350	1.879
360.	4.947	34.558	2.00	27.366	1.914
370.	4.925	34.563	2.04	27.414	1.979

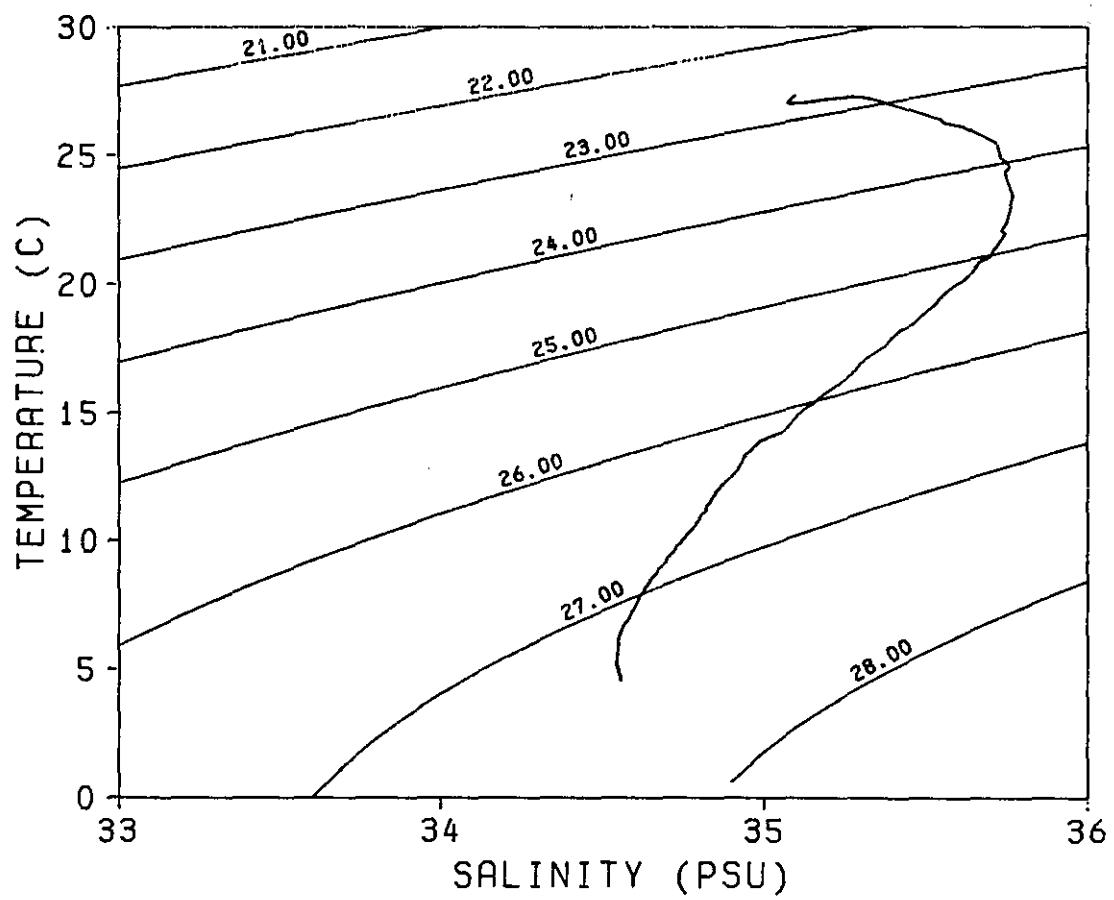
CAST CONRAD-82-008 DATE 20 SEP 82 TIME 0256 GMT  
LAT 0 26.8S LONG 137 56.9W

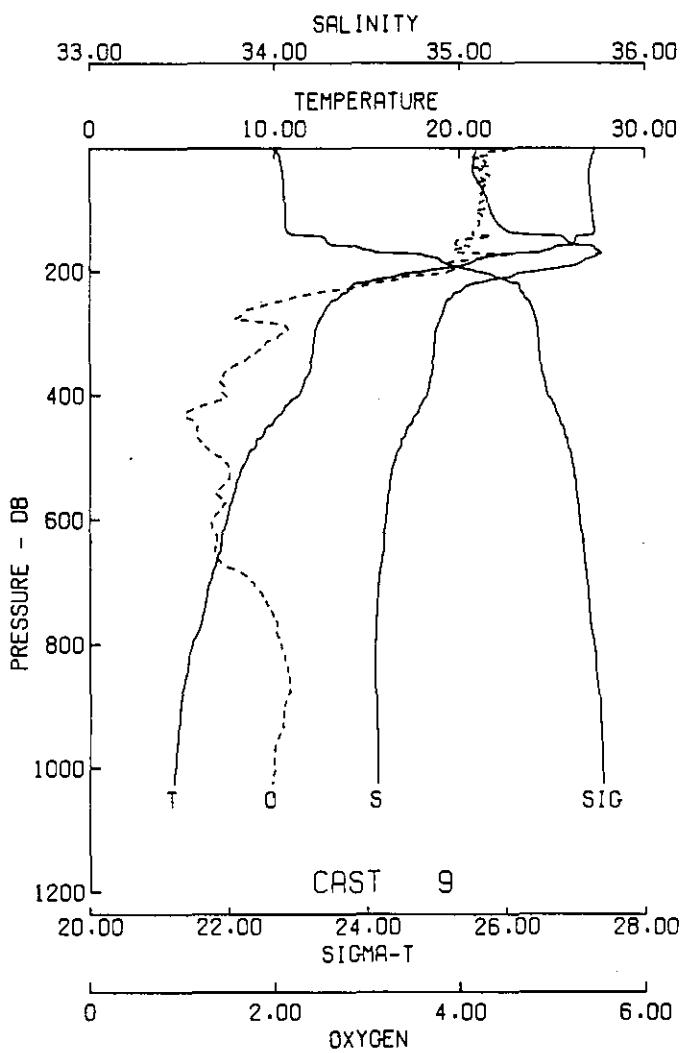




CLOUD	CAST CONRAD-82-008 DATE 20 SEP 82 TIME 0256 GMT	LAT 0 26.8S LONG 137 56.9W WEATHER SEA STATE	BAROMETER WIND DIP T SPD KT VISIBILITY	DEPTH
	CLOUD AMOUNT	DRY WET		
0	27.3003	0.999	4 • 5.66	22 • 714
1	26.903	0.993	4 • 5.66	22 • 712
2	26.644	1.000	4 • 5.66	22 • 716
3	14.517	1.000	4 • 5.66	22 • 734
4	16.667	1.000	4 • 4.44	22 • 751
5	17.740	1.000	4 • 4.44	22 • 760
6	18.550	1.000	4 • 4.44	22 • 774
7	17.747	1.000	4 • 4.44	22 • 787
8	17.747	1.000	4 • 4.44	22 • 791
9	18.550	1.000	4 • 4.44	22 • 798
10	26.177	1.000	4 • 4.44	22 • 802
11	26.744	1.000	4 • 4.44	22 • 807
12	28.253	1.000	3 • 3.73	22 • 813
13	28.253	1.000	3 • 3.73	22 • 816
14	28.253	1.000	3 • 3.73	22 • 819
15	28.253	1.000	3 • 3.73	22 • 822
16	28.253	1.000	3 • 3.73	22 • 825
17	28.253	1.000	3 • 3.73	22 • 828
18	28.253	1.000	3 • 3.73	22 • 831
19	28.253	1.000	3 • 3.73	22 • 834
20	28.253	1.000	3 • 3.73	22 • 837
21	28.253	1.000	3 • 3.73	22 • 840
22	28.253	1.000	3 • 3.73	22 • 843
23	28.253	1.000	3 • 3.73	22 • 846
24	28.253	1.000	3 • 3.73	22 • 849
25	28.253	1.000	3 • 3.73	22 • 852
26	28.253	1.000	3 • 3.73	22 • 855
27	28.253	1.000	3 • 3.73	22 • 858
28	28.253	1.000	3 • 3.73	22 • 861
29	28.253	1.000	3 • 3.73	22 • 864
30	28.253	1.000	3 • 3.73	22 • 867

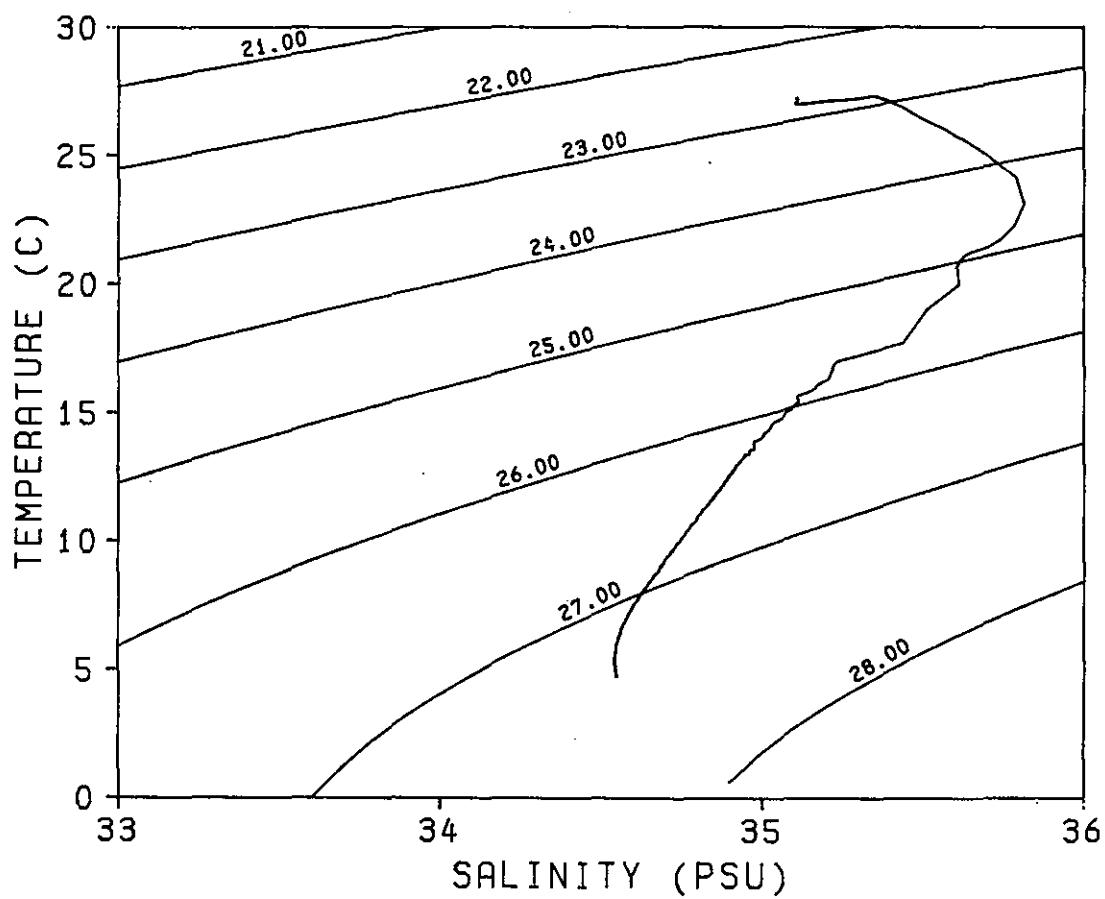
CAST CONRAD-82-009 DATE 21 SEP 82 TIME 1135 GMT  
LAT 1 13.8S LONG 137 59.0W



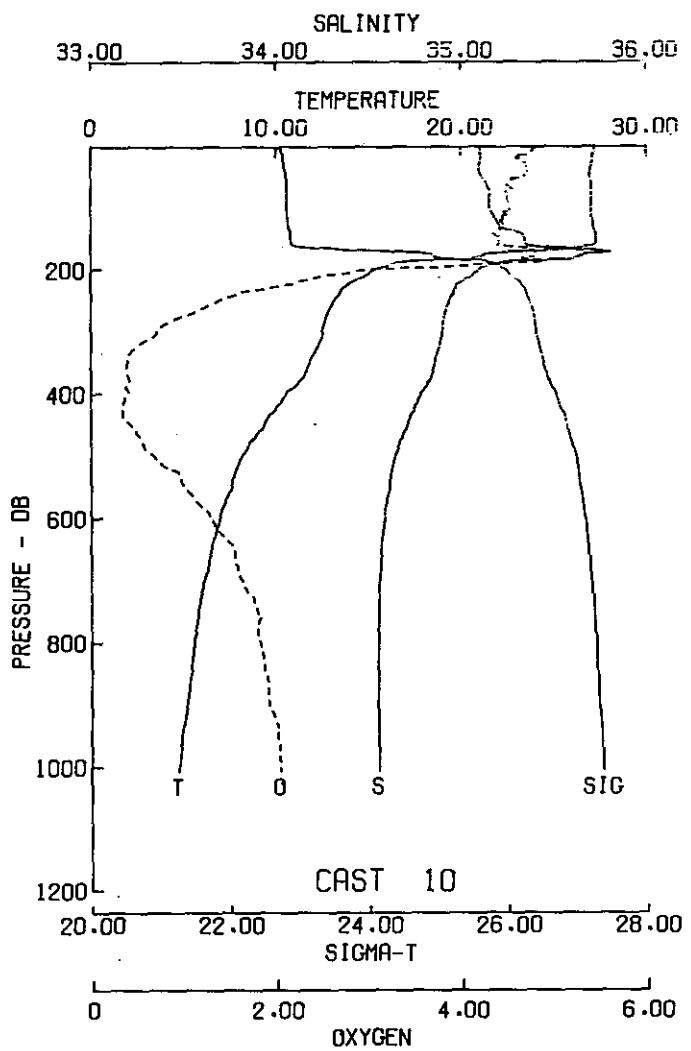


CAST	CCW/AD-2-006	DATE 21 SEP 82	TIME 1135 GMT
LAT	1° 12' S	DIR 137	SEA STATE
BAROMETER	1013	SPD 59.04	VISIBILITY
CLOUD	AMOUNT	TRY	DEPTH
DEPTHS (DB)	TEMP (°C)	SAL (PSU)	OXY (ML/L)
0	27.0	34.8	7.0
100	27.0	32.2	6.6
200	27.0	32.2	6.6
300	27.0	32.2	6.6
400	27.0	32.2	6.6
500	27.0	32.2	6.6
600	27.0	32.2	6.6
700	27.0	32.2	6.6
800	27.0	32.2	6.6
900	27.0	32.2	6.6
1000	27.0	32.2	6.6
1100	27.0	32.2	6.6
1200	27.0	32.2	6.6
1300	27.0	32.2	6.6
1400	27.0	32.2	6.6
1500	27.0	32.2	6.6
1600	27.0	32.2	6.6
1700	27.0	32.2	6.6
1800	27.0	32.2	6.6
1900	27.0	32.2	6.6
2000	27.0	32.2	6.6
2100	27.0	32.2	6.6
2200	27.0	32.2	6.6
2300	27.0	32.2	6.6
2400	27.0	32.2	6.6
2500	27.0	32.2	6.6
2600	27.0	32.2	6.6
2700	27.0	32.2	6.6
2800	27.0	32.2	6.6
2900	27.0	32.2	6.6
3000	27.0	32.2	6.6
3100	27.0	32.2	6.6
3200	27.0	32.2	6.6
3300	27.0	32.2	6.6
3400	27.0	32.2	6.6
3500	27.0	32.2	6.6
3600	27.0	32.2	6.6
3700	27.0	32.2	6.6
3800	27.0	32.2	6.6
3900	27.0	32.2	6.6
4000	27.0	32.2	6.6
4100	27.0	32.2	6.6
4200	27.0	32.2	6.6
4300	27.0	32.2	6.6
4400	27.0	32.2	6.6
4500	27.0	32.2	6.6
4600	27.0	32.2	6.6
4700	27.0	32.2	6.6
4800	27.0	32.2	6.6
4900	27.0	32.2	6.6
5000	27.0	32.2	6.6
5100	27.0	32.2	6.6
5200	27.0	32.2	6.6
5300	27.0	32.2	6.6
5400	27.0	32.2	6.6
5500	27.0	32.2	6.6
5600	27.0	32.2	6.6
5700	27.0	32.2	6.6
5800	27.0	32.2	6.6
5900	27.0	32.2	6.6
6000	27.0	32.2	6.6
6100	27.0	32.2	6.6
6200	27.0	32.2	6.6
6300	27.0	32.2	6.6
6400	27.0	32.2	6.6
6500	27.0	32.2	6.6
6600	27.0	32.2	6.6
6700	27.0	32.2	6.6
6800	27.0	32.2	6.6
6900	27.0	32.2	6.6
7000	27.0	32.2	6.6
7100	27.0	32.2	6.6
7200	27.0	32.2	6.6
7300	27.0	32.2	6.6
7400	27.0	32.2	6.6
7500	27.0	32.2	6.6
7600	27.0	32.2	6.6
7700	27.0	32.2	6.6
7800	27.0	32.2	6.6
7900	27.0	32.2	6.6
8000	27.0	32.2	6.6
8100	27.0	32.2	6.6
8200	27.0	32.2	6.6
8300	27.0	32.2	6.6
8400	27.0	32.2	6.6
8500	27.0	32.2	6.6
8600	27.0	32.2	6.6
8700	27.0	32.2	6.6
8800	27.0	32.2	6.6
8900	27.0	32.2	6.6
9000	27.0	32.2	6.6
9100	27.0	32.2	6.6
9200	27.0	32.2	6.6
9300	27.0	32.2	6.6
9400	27.0	32.2	6.6
9500	27.0	32.2	6.6
9600	27.0	32.2	6.6
9700	27.0	32.2	6.6
9800	27.0	32.2	6.6
9900	27.0	32.2	6.6
10000	27.0	32.2	6.6
10100	27.0	32.2	6.6
10200	27.0	32.2	6.6
10300	27.0	32.2	6.6
10400	27.0	32.2	6.6
10500	27.0	32.2	6.6
10600	27.0	32.2	6.6
10700	27.0	32.2	6.6
10800	27.0	32.2	6.6
10900	27.0	32.2	6.6
11000	27.0	32.2	6.6
11100	27.0	32.2	6.6
11200	27.0	32.2	6.6
11300	27.0	32.2	6.6
11400	27.0	32.2	6.6
11500	27.0	32.2	6.6
11600	27.0	32.2	6.6
11700	27.0	32.2	6.6
11800	27.0	32.2	6.6
11900	27.0	32.2	6.6
12000	27.0	32.2	6.6
12100	27.0	32.2	6.6
12200	27.0	32.2	6.6
12300	27.0	32.2	6.6
12400	27.0	32.2	6.6
12500	27.0	32.2	6.6
12600	27.0	32.2	6.6
12700	27.0	32.2	6.6
12800	27.0	32.2	6.6
12900	27.0	32.2	6.6
13000	27.0	32.2	6.6
13100	27.0	32.2	6.6
13200	27.0	32.2	6.6
13300	27.0	32.2	6.6
13400	27.0	32.2	6.6
13500	27.0	32.2	6.6
13600	27.0	32.2	6.6
13700	27.0	32.2	6.6
13800	27.0	32.2	6.6
13900	27.0	32.2	6.6
14000	27.0	32.2	6.6
14100	27.0	32.2	6.6
14200	27.0	32.2	6.6
14300	27.0	32.2	6.6
14400	27.0	32.2	6.6
14500	27.0	32.2	6.6
14600	27.0	32.2	6.6
14700	27.0	32.2	6.6
14800	27.0	32.2	6.6
14900	27.0	32.2	6.6
15000	27.0	32.2	6.6
15100	27.0	32.2	6.6
15200	27.0	32.2	6.6
15300	27.0	32.2	6.6
15400	27.0	32.2	6.6
15500	27.0	32.2	6.6
15600	27.0	32.2	6.6
15700	27.0	32.2	6.6
15800	27.0	32.2	6.6
15900	27.0	32.2	6.6
16000	27.0	32.2	6.6
16100	27.0	32.2	6.6
16200	27.0	32.2	6.6
16300	27.0	32.2	6.6
16400	27.0	32.2	6.6
16500	27.0	32.2	6.6
16600	27.0	32.2	6.6
16700	27.0	32.2	6.6
16800	27.0	32.2	6.6
16900	27.0	32.2	6.6
17000	27.0	32.2	6.6
17100	27.0	32.2	6.6
17200	27.0	32.2	6.6
17300	27.0	32.2	6.6
17400	27.0	32.2	6.6
17500	27.0	32.2	6.6
17600	27.0	32.2	6.6
17700	27.0	32.2	6.6
17800	27.0	32.2	6.6
17900	27.0	32.2	6.6
18000	27.0	32.2	6.6
18100	27.0	32.2	6.6
18200	27.0	32.2	6.6
18300	27.0	32.2	6.6
18400	27.0	32.2	6.6
18500	27.0	32.2	6.6
18600	27.0	32.2	6.6
18700	27.0	32.2	6.6
18800	27.0	32.2	6.6
18900	27.0	32.2	6.6
19000	27.0	32.2	6.6
19100	27.0	32.2	6.6
19200	27.0	32.2	6.6
19300	27.0	32.2	6.6
19400	27.0	32.2	6.6
19500	27.0	32.2	6.6
19600	27.0	32.2	6.6
19700	27.0	32.2	6.6
19800	27.0	32.2	6.6
19900	27.0	32.2	6.6
20000	27.0	32.2	6.6
20100	27.0	32.2	6.6
20200	27.0	32.2	6.6
20300	27.0	32.2	6.6
20400	27.0	32.2	6.6
20500	27.0	32.2	6.6
20600	27.0	32.2	6.6
20700	27.0	32.2	6.6
20800	27.0	32.2	6.6
20900	27.0	32.2	6.6
21000	27.0	32.2	6.6
21100	27.0	32.2	6.6
21200	27.0	32.2	6.6
21300	27.0	32.2	6.6
21400	27.0	32.2	6.6
21500	27.0	32.2	6.6
21600	27.0	32.2	6.6
21700	27.0	32.2	6.6
21800	27.0	32.2	6.6
21900	27.0	32.2	6.6
22000	27.0	32.2	6.6
22100	27.0	32.2	6.6
22200	27.0	32.2	6.6
22300	27.0	32.2	6.6
22400	27.0	32.2	6.6
22500	27.0	32.2	6.6
22600	27.0	32.2	6.6
22700	27.0	32.2	6.6
22800	27.0	32.2	6.6
22900	27.0	32.2	6.6
23000	27.0	32.2	6.6
23100	27.0	32.2	6.6
23200	27.0	32.2	6.6
23300	27.0	32.2	6.6
23400	27.0	32.2	6.6
23500	27.0	32.2	6.6
23600	27.0	32.2	6.6
23700	27.0	32.2	6.6
23800	27.0	32.2	6.6
23900	27.0	32.2	6.6
24000	27.0	32.2	6.6
24100	27.0	32.2	6.6
24200	27.0	32.2	6.6
24300	27.0	32.2	6.6
24400	27.0	32.2	6.6
24500	27.0	32.2	6.6
24600	27.0	32.2	6.6
24700	27.0	32.2	6.6
24800	27.0	32.2	6.6
24900	27.0	32.2	6.6
25000	27.0	32.2	6.6
25100	27.0	32.2	6.6
25200	27.0	32.2	6.6
25300	27.0	32.2	6.6
25400	27.0	32.2	6.6
25500	27.0	32.2	6.6
25600	27.0	32.2	6.6
25700	27.0	32.2	6.6
25800	27.0	32.2	6.6
25900	27.0	32.2	6.6
26000	27.0	32.2	6.6
26100	27.0	32.2	6.6
26200	27.0	32.2	6.6
26300	27.0	32.2	6.6
26400	27.0	32.2	6.6
26500</td			

CAST CONRAD-82-010 DATE 21 SEP 82 TIME 1957 GMT  
LAT 1 57.6S LONG 138 00.4W



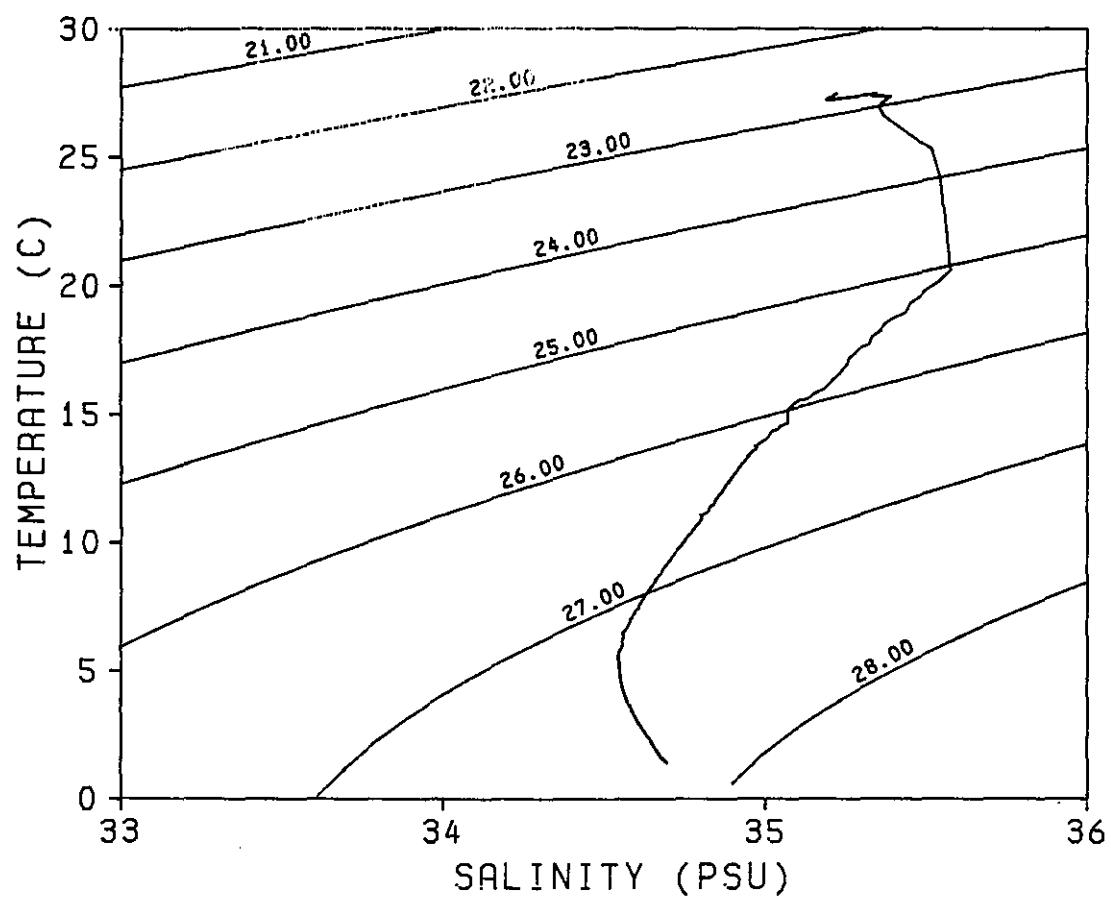
55

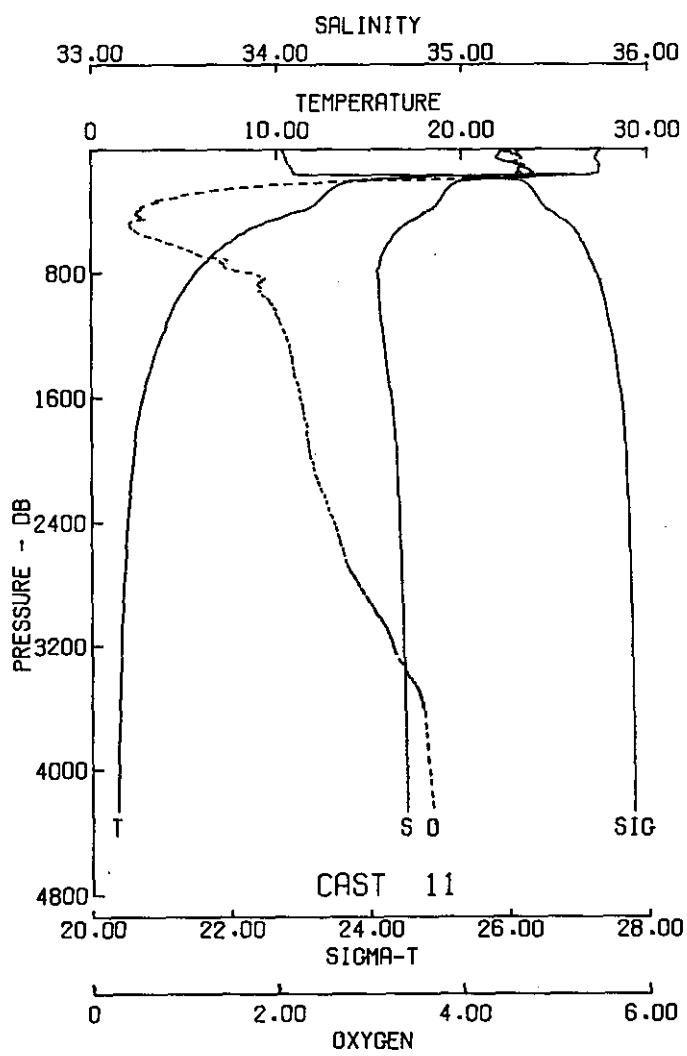


CAST CCNRAO-82-010 DATE 21 SEP 82 TIME 1957 GMT  
 LAT 15°57.6'S LONG 138°09.4'W WEATHER SEA STATE 3  
 BAROMETER 1014 WTND DIR 135 T SPD 10 KT VISIBILITY  
 CLOUD AMOUNT DRY WET DEPTH M

PRES (DB)	TEMP (C)	SAL (PSU)	OXY (ML/L)	SIG-T	DELTA-I (DYN-M)
0	27.223	34.555	4.81	22.742	0.000
100	27.209	34.555	4.75	22.751	.051
200	27.138	34.621	4.62	22.774	.102
300	27.071	34.671	4.71	22.791	.153
400	26.994	34.731	4.73	22.814	.204
500	27.030	34.771	4.58	22.825	.254
600	27.031	34.811	4.57	22.832	.304
700	27.052	34.851	4.55	22.833	.356
800	27.056	34.881	4.51	22.834	.408
900	27.054	34.911	4.51	22.837	.457
1000	27.054	34.941	4.51	22.839	.508
1100	27.077	34.971	4.47	22.841	.559
1200	27.113	34.991	4.47	22.844	.609
1300	27.151	35.011	4.46	22.847	.660
1400	27.262	35.031	4.40	22.883	.710
1500	27.327	35.051	4.43	22.892	.761
1600	27.305	35.071	4.31	22.913	.811
1700	24.144	35.091	4.31	24.212	.857
1800	21.131	35.111	4.77	24.856	.890
1900	16.586	35.111	4.59	25.791	.916
2000	15.345	35.111	3.34	25.993	.938
2250	13.157	34.938	1.34	26.331	1.033
3350	12.523	34.898	1.71	26.426	1.119
3500	11.841	34.861	1.45	26.520	1.202
4500	10.571	34.783	1.51	26.702	1.278
4550	9.359	34.711	1.46	26.853	1.346
5550	8.130	34.642	1.69	26.993	1.409
6550	7.582	34.512	1.91	27.351	1.465
6650	6.932	34.584	1.93	27.126	1.519
7250	6.190	34.561	1.93	27.166	1.570
7500	5.788	34.551	1.86	27.211	1.610
8000	5.547	34.550	1.86	27.246	1.666
8500	5.390	34.549	1.82	27.275	1.712
9000	5.182	34.549	1.93	27.293	1.757
9500	4.885	34.551	1.93	27.318	1.801
10000	4.732	34.552	2.04	27.354	1.844
10070	4.710	34.552	2.04	27.373	1.885

CAST CONRAD-82-011 DATE 22 SEP 82 TIME 0719 GMT  
LAT 300.2S LONG 137 58.7W

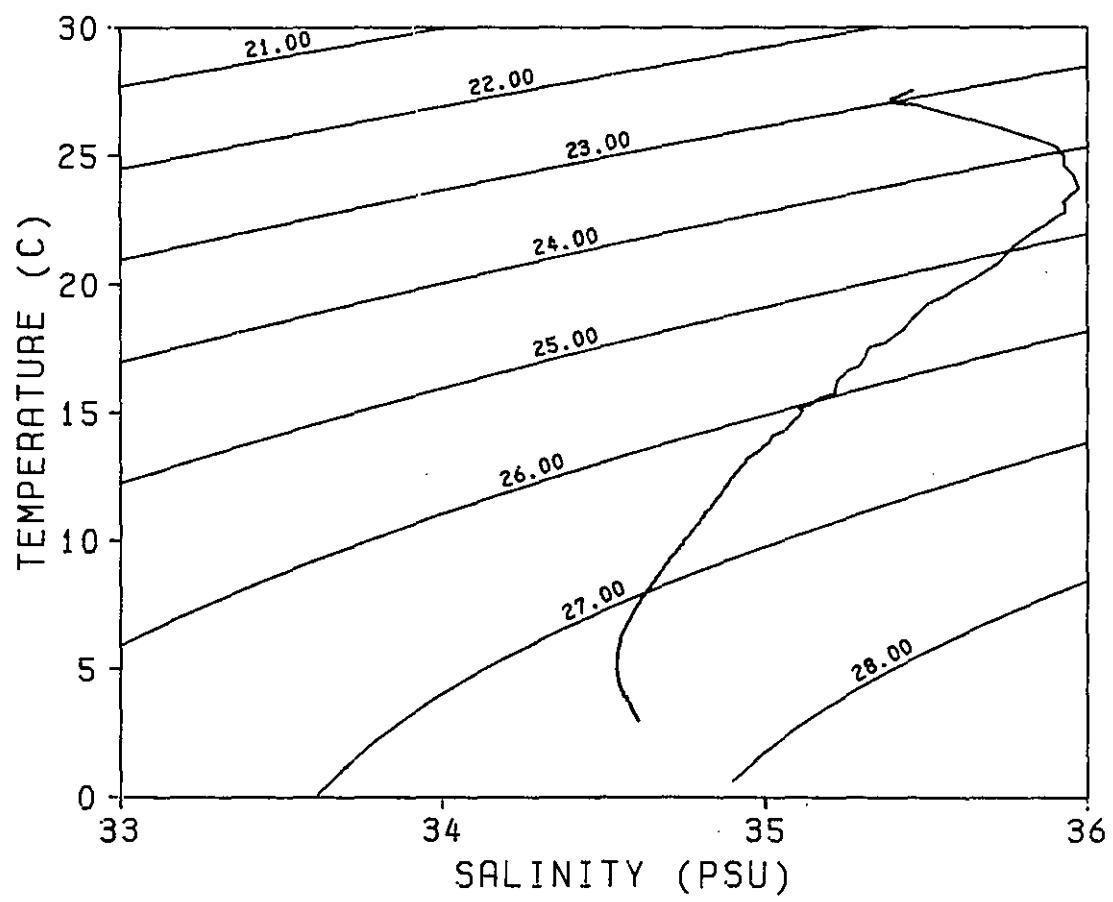


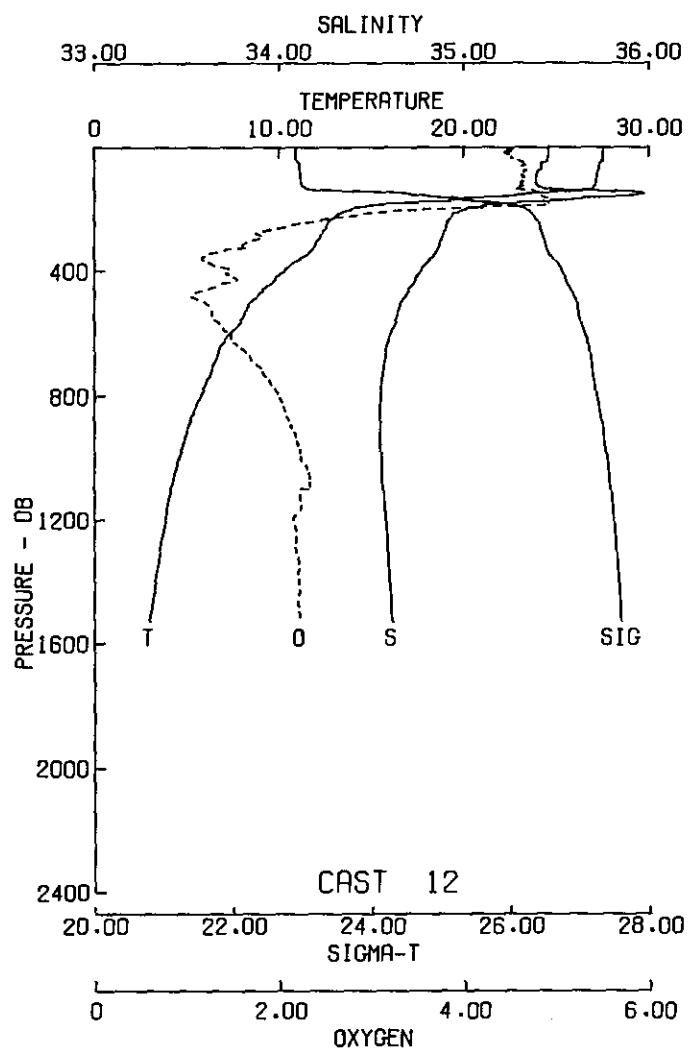


CAST CONRAD-82-012 DATE 22 SEP 82 TIME 0719 GMT  
 LAT 3 00.2S LONG 137 58.7W WEATHER SEA STATE  
 BAROMETER 1013 WIND DIR 120 T SPD 07 KT VISIBILITY  
 CLOUD AMOUNT DRY WET DEPTH 4500 M

PRES (DB)	TEMP (C)	SAL (PSU)	OXY (ML/L)	SIG-T	DELTA-T (DYN-M)
0	27.472	34.677	4.77	22.748	0.000
7	27.473	34.678	4.77	22.749	0.051
14	27.397	34.679	4.77	22.768	0.103
21	27.335	34.680	4.77	22.783	0.204
28	27.268	34.681	4.77	22.798	0.204
35	27.224	34.682	4.77	22.800	0.204
42	27.244	34.683	4.77	22.810	0.204
49	27.349	34.684	4.77	22.813	0.204
56	27.382	34.685	4.77	22.814	0.204
63	27.475	34.686	4.77	22.815	0.204
70	27.405	34.687	4.77	22.816	0.204
77	27.370	34.688	4.77	22.817	0.204
84	27.377	34.689	4.77	22.818	0.204
91	27.357	34.690	4.77	22.819	0.204
98	27.324	34.691	4.77	22.820	0.204
105	27.613	34.692	4.77	22.926	0.544
112	28.000	34.693	4.81	25.846	0.883
119	28.362	34.694	4.81	26.154	0.904
126	28.561	34.695	4.81	26.416	0.917
133	28.308	34.696	4.81	26.483	1.014
140	28.561	34.697	4.81	26.761	1.104
147	28.141	34.698	4.81	26.914	1.167
154	28.339	34.699	4.81	26.952	1.236
161	28.063	34.700	4.81	26.953	1.236
168	28.846	34.701	4.81	26.954	1.236
175	28.256	34.702	4.81	27.000	1.277
182	28.541	34.703	4.81	27.050	1.374
189	28.944	34.704	4.81	27.121	1.474
196	28.508	34.705	4.81	27.166	1.527
203	28.034	34.706	4.81	27.221	1.574
210	28.619	34.707	4.81	27.263	1.723
217	28.297	34.708	4.81	27.303	1.768
224	28.552	34.709	4.81	27.336	1.811
231	28.777	34.710	4.81	27.368	1.853
238	28.536	34.711	4.81	27.397	1.924
245	28.995	34.712	4.81	27.593	2.241
252	28.254	34.713	4.82	27.691	2.516
259	28.991	34.714	4.82	27.733	2.762
266	28.653	34.715	4.82	27.762	2.992
273	28.537	34.716	4.82	27.770	3.211
280	28.688	34.717	4.82	27.797	3.211
287	28.407	34.699	3.68	27.797	3.211

CAST CONRAD-82-012 DATE 22 SEP 82 TIME 1630 GMT  
LAT 358.9S LONG 138 00.1W

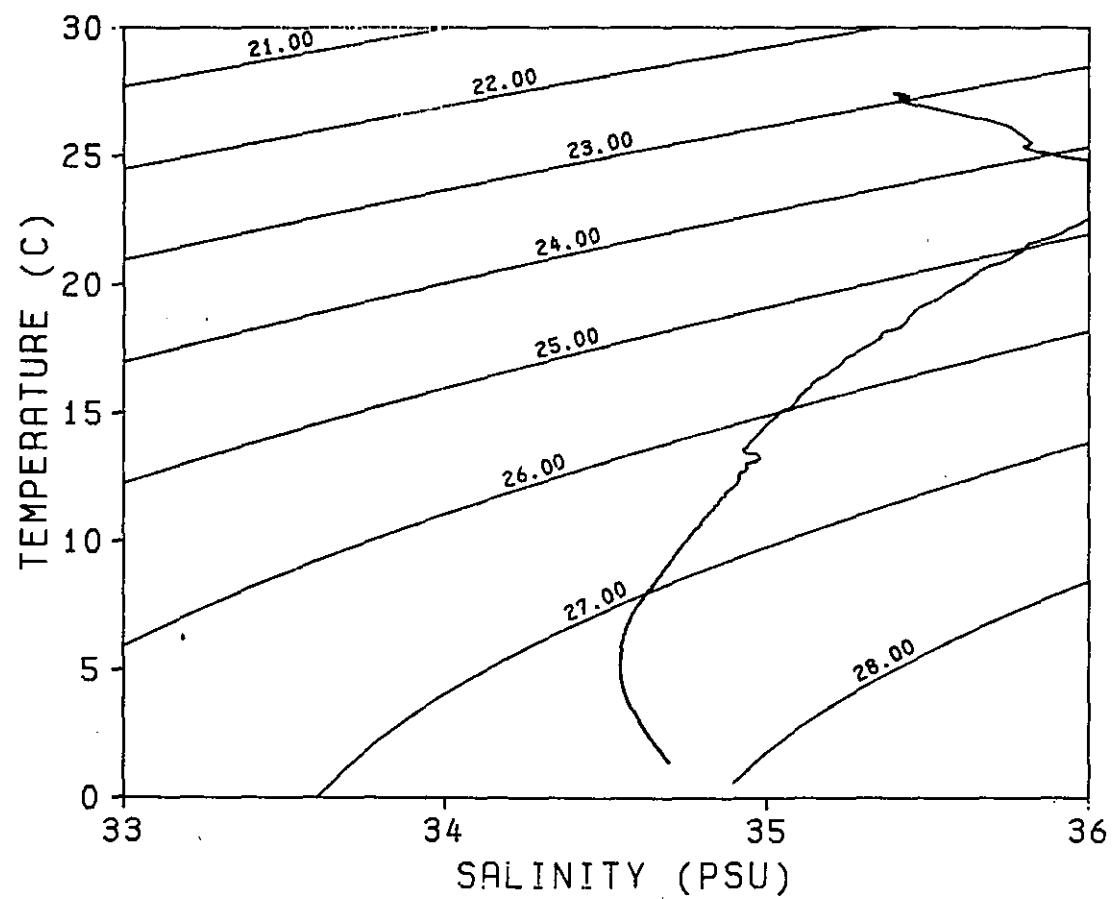


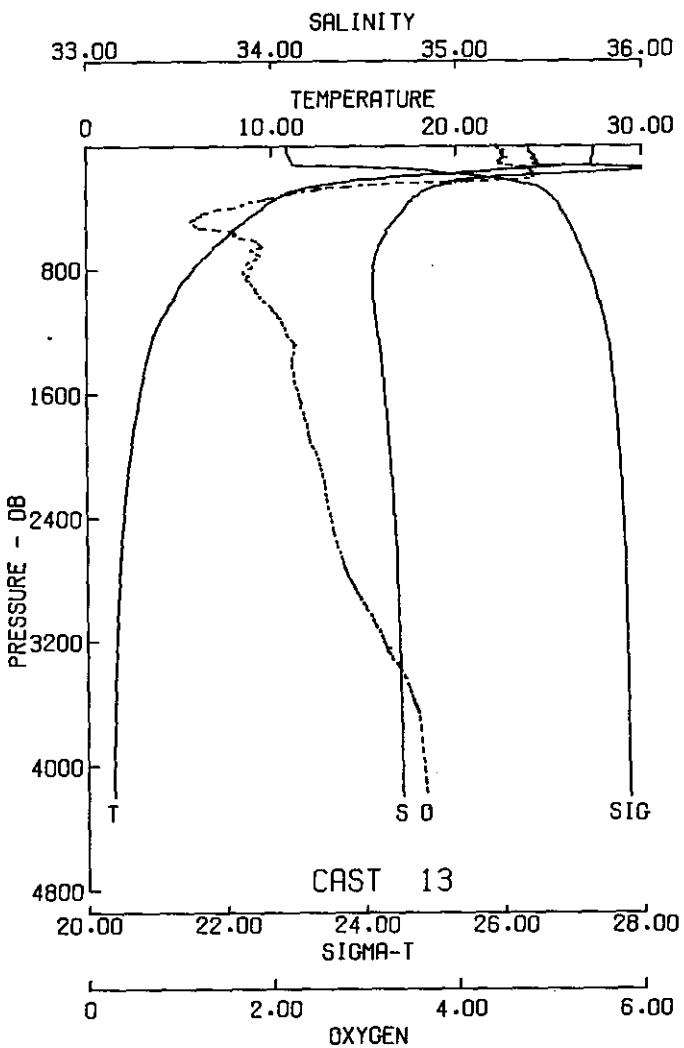


CAST CCNRAD-82-012 DATE 22 SEP 82 TIME 1630 GMT  
 LAT 35° 49' S LONG 138° 00' 1W WEATHER SEA STATE  
 BAROMETER 1013 WIND DIR 090° T SPD 03 KT VISIBILITY  
 CLOUD AMOUNT DRY WET DEPTH M

PRES (DB)	TEMP (°C)	SAL (PSU)	OXY (ML/L)	SIG-T	DELTA-T (DYN-M)
0.	27.528	35.461	4.68	22.913	0.000
10.	27.543	35.454	4.65	22.907	0.000
20.	27.536	35.460	4.64	22.912	0.149
30.	27.535	35.460	4.65	22.913	0.199
40.	27.521	35.457	4.65	22.913	0.248
50.	27.391	35.421	4.67	22.955	0.298
60.	27.293	35.410	4.65	22.957	0.347
70.	27.219	35.399	4.65	22.966	0.397
80.	27.197	35.394	4.63	22.970	0.446
90.	27.166	35.390	4.63	22.977	0.495
100.	27.150	35.391	4.64	22.982	0.545
110.	27.136	35.393	4.65	22.983	0.594
120.	27.024	35.420	4.73	23.044	0.643
130.	26.519	35.602	4.83	23.343	0.692
140.	23.543	35.961	4.85	24.521	0.731
150.	13.543	35.849	4.85	24.844	0.765
160.	13.543	35.583	4.85	25.287	0.794
170.	17.124	35.311	4.93	25.734	0.810
180.	13.923	35.113	4.73	25.976	0.848
190.	12.879	34.904	3.77	26.232	0.863
200.	12.084	34.879	2.20	26.422	0.947
210.	11.519	34.843	1.76	26.497	1.030
220.	10.393	34.768	1.44	26.576	1.109
230.	9.741	34.712	1.31	26.734	1.183
240.	8.449	34.661	1.18	26.853	1.256
250.	8.043	34.635	1.29	27.001	1.312
260.	7.338	34.601	1.46	27.077	1.371
270.	6.761	34.577	1.61	27.154	1.422
280.	6.416	34.564	1.75	27.174	1.481
290.	6.092	34.554	1.93	27.213	1.532
300.	5.757	34.547	2.00	27.247	1.620
310.	5.393	34.544	2.06	27.282	1.675
320.	5.046	34.544	2.11	27.333	1.718
330.	4.946	34.546	2.19	27.355	1.761
340.	4.554	34.550	2.23	27.393	1.801
350.	3.962	34.605	2.21	27.586	2.149
360.	3.657	34.610	2.23	27.599	

CAST CONRAD-82-013 DATE 23 SEP 82 TIME 0054 GMT  
LAT 5 00.0S LONG 138 00.1W

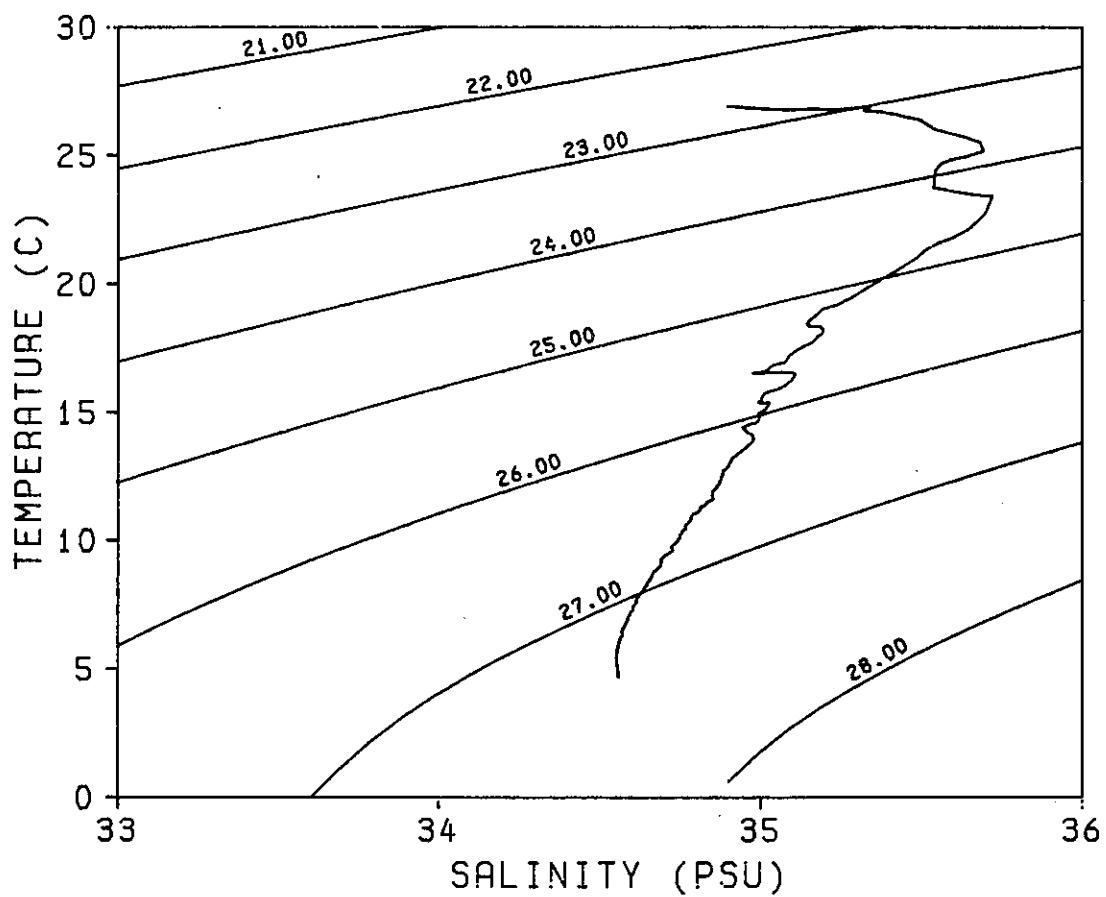


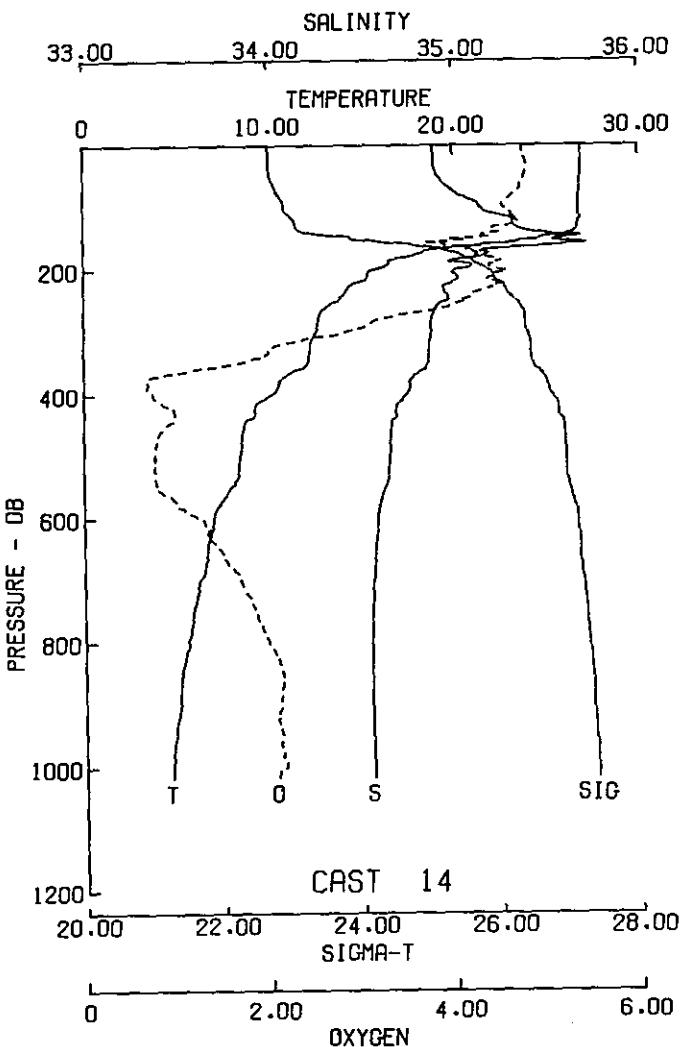


CAST CCNRAD-82-013 DATE 23 SEP 82 TIME 0054 GMT  
 LAT 30° 00' S LONG 138° 00.1 W WEATHER 1 SEA STATE 3  
 BAROMETER 1011 WIND DIR 101 T SPD 09 KT VISIBILITY 8  
 CLOUD 8 AMOUNT 7 DRY WET DEPTH 0 M

PRES (DB)	TEMP (C)	SAL (PSU)	OXY (ML/L)	STG-T	DELTA-T (DYN-M)
0	27.434	35.397	4.45	22.895	0.000
10	27.434	35.394	4.44	22.893	0.050
20	27.432	35.392	4.46	22.892	0.100
30	27.411	35.393	4.51	22.898	0.140
40	27.414	35.396	4.51	22.905	0.190
50	27.413	35.400	4.52	22.916	0.240
60	27.365	35.422	4.51	22.948	0.290
70	27.329	35.425	4.48	22.951	0.340
80	27.287	35.432	4.48	22.956	0.390
90	27.337	35.444	4.48	22.961	0.440
100	27.317	35.444	4.49	22.973	0.490
110	27.237	35.411	4.49	22.977	0.540
120	26.405	35.688	4.60	24.077	0.590
130	24.043	35.922	4.68	24.687	0.640
140	23.186	36.042	4.82	24.893	0.690
150	22.244	36.953	4.83	25.041	0.740
160	21.069	35.611	4.83	25.226	0.790
170	18.332	35.414	4.85	25.523	0.840
180	16.003	35.234	4.81	25.725	0.890
190	11.044	34.823	4.83	26.359	0.940
200	9.597	34.727	4.85	26.646	0.990
210	8.522	34.602	4.85	26.826	1.040
220	7.485	34.621	4.85	26.955	1.090
230	7.497	34.603	4.86	27.014	1.140
240	6.958	34.579	4.86	27.056	1.190
250	6.627	34.560	4.85	27.202	1.240
260	6.197	34.560	4.85	27.248	1.290
270	5.781	34.552	4.74	27.283	1.340
280	5.492	34.554	4.78	27.327	1.390
290	5.100	34.548	4.85	27.351	1.440
300	4.646	34.552	4.91	27.381	1.490
310	3.258	34.605	4.91	27.586	1.540
320	2.772	34.633	4.94	27.673	1.590
330	1.922	34.667	4.94	27.733	1.640
340	1.681	34.682	4.94	27.763	1.690
350	1.527	34.691	4.97	27.782	1.740
360	1.414	34.701	4.67	27.798	1.790

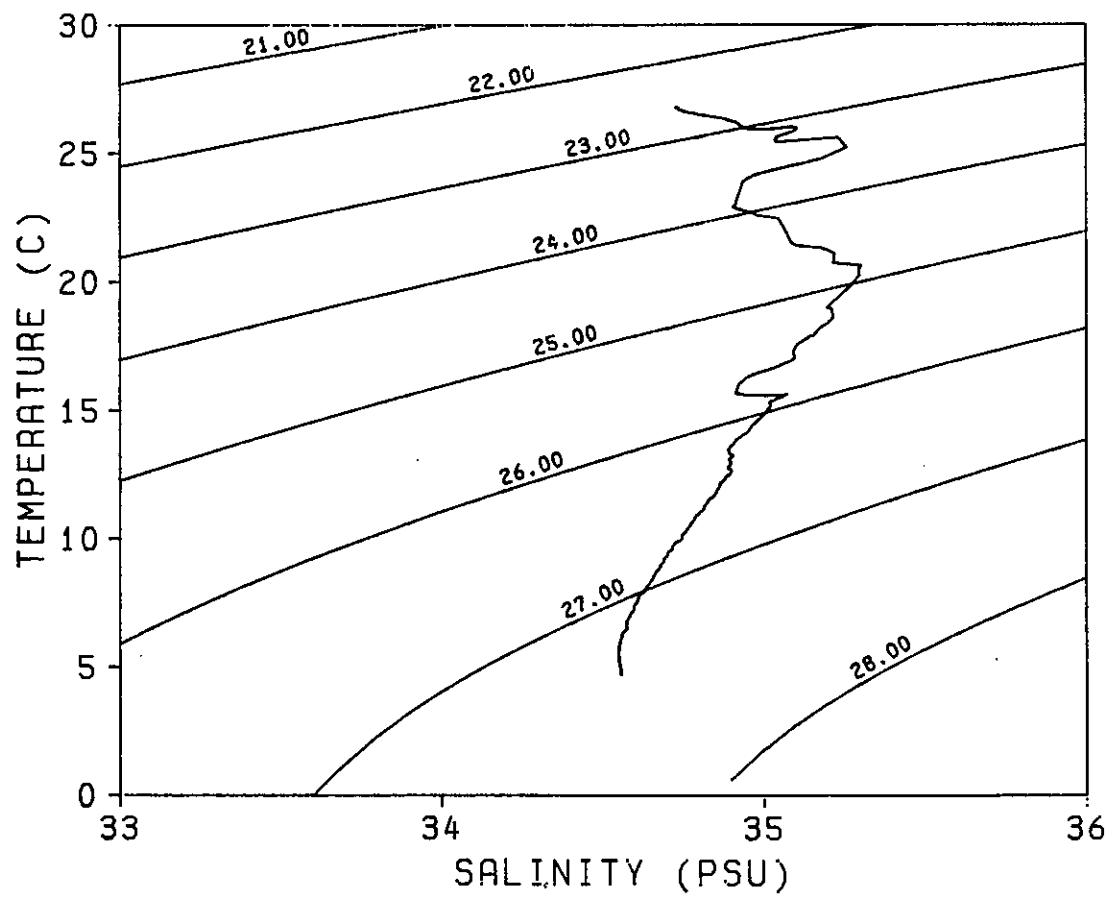
CAST CONRAD-82-014 DATE 25 SEP 82 TIME 1602 GMT  
LAT 0 00.2S LONG 129 59.1W

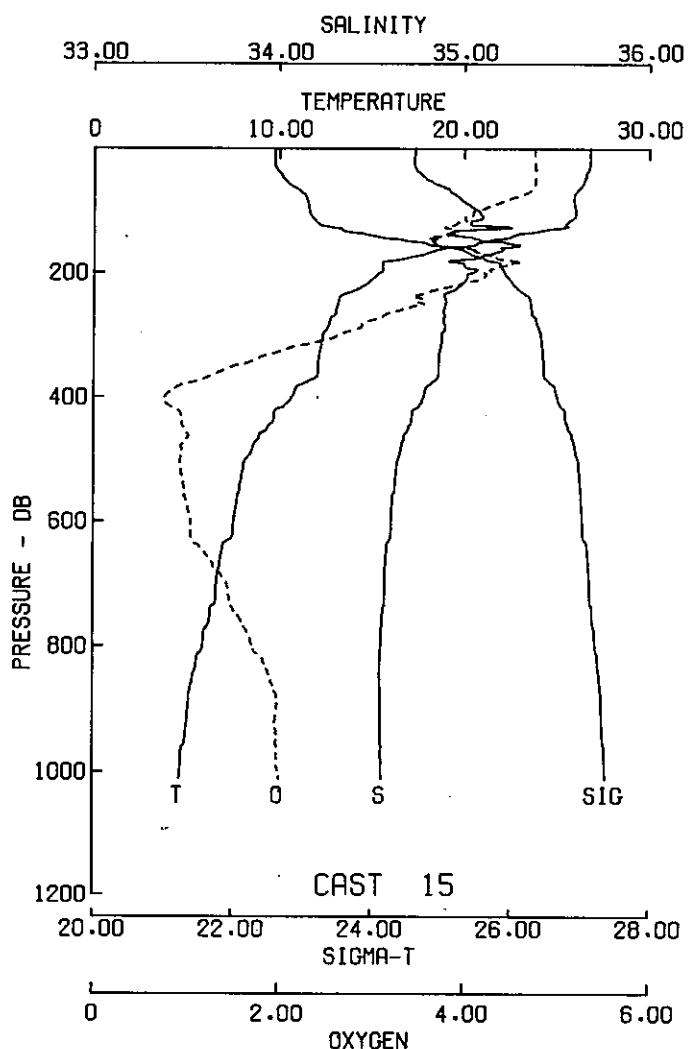




CAST	CONRAD-82-014	DATE	25 SEP 82	TIME	1602 GMT	WEATHER	SEA STATE
LAT	0 00.2S	LONG	129 59.1W	BAROMETER	12	WIND DTR	122 T SPD 10 KT
CLOUD	AMOUNT	DRY	WET	VISIBILITY	DEPTH		
0.	26.922	34.899	4.76	22.688	m	0.000	
100	26.922	34.895	4.76	22.683	m	.052	
200	26.921	34.897	4.77	22.684	m	.104	
300	26.924	34.898	4.80	22.685	m	.156	
400	26.921	34.908	4.79	22.690	m	.207	
500	26.904	34.918	4.77	22.706	m	.259	
600	25.863	34.951	4.76	22.743	m	.311	
700	26.832	34.980	4.72	22.781	m	.362	
800	26.800	34.980	4.65	22.820	m	.413	
900	26.786	34.951	4.58	22.860	m	.463	
1000	26.824	34.951	4.57	22.900	m	.514	
1100	26.794	34.951	4.55	22.950	m	.564	
1200	26.804	34.951	4.55	23.000	m	.613	
1300	26.729	33.951	4.57	23.073	m	.661	
1400	26.519	33.951	4.56	23.225	m	.709	
1500	24.729	37.574	4.12	23.875	m	.753	
1600	21.777	37.574	3.91	24.750	m	.796	
1700	18.577	37.574	3.34	25.264	m	.821	
1800	17.355	37.574	4.7	25.493	m	.847	
1900	16.572	37.665	4.49	25.832	m	.871	
2000	15.775	37.665	4.07	26.235	m	.894	
2100	13.714	34.962	2.81	26.404	m	.996	
2200	12.566	34.880	1.63	26.484	m	1.084	
2300	12.078	34.862	1.75	26.753	m	1.167	
2400	10.124	34.742	0.86	26.927	m	1.242	
2500	8.666	34.663	0.49	26.934	m	1.307	
2600	8.447	34.653	0.07	27.011	m	1.367	
2700	7.036	34.628	0.81	27.110	m	1.427	
2800	7.008	34.503	0.75	27.160	m	1.482	
2900	6.664	34.574	0.24	27.160	m	1.533	
3000	6.203	34.562	0.48	27.160	m	1.584	
3100	5.880	34.556	1.85	27.270	m	1.632	
3200	5.582	34.552	0.50	27.270	m	1.678	
3300	5.205	34.551	2.12	27.320	m	1.723	
3400	4.908	34.553	2.13	27.360	m	1.766	
3500	4.640	34.556	2.13	27.380	m	1.808	
3600	4.692	34.558	2.08	27.380	m	1.849	
3700	4.680	34.558	2.08	27.380	m		

CAST CONRAD-82-015 DATE 27 SEP 82 TIME 0225 GMT  
LAT 00 00.0N LONG 124 59.9W

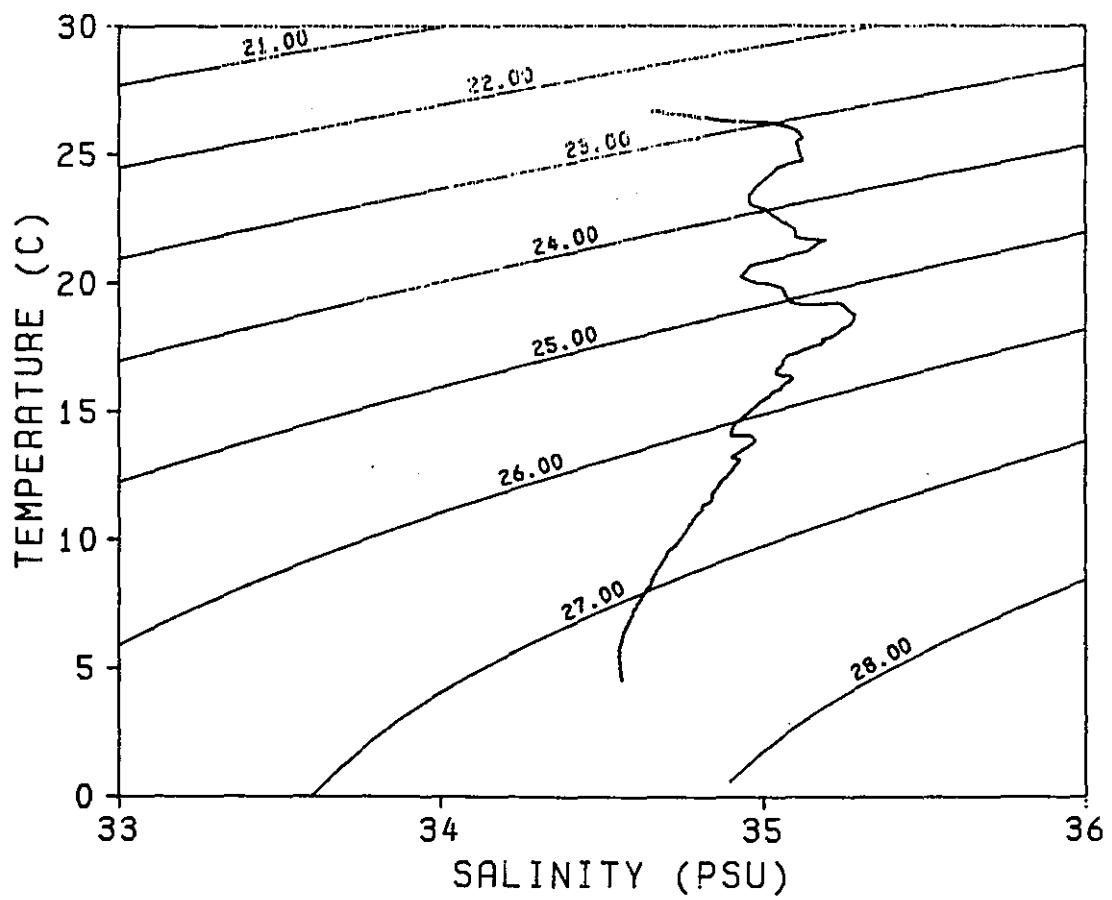


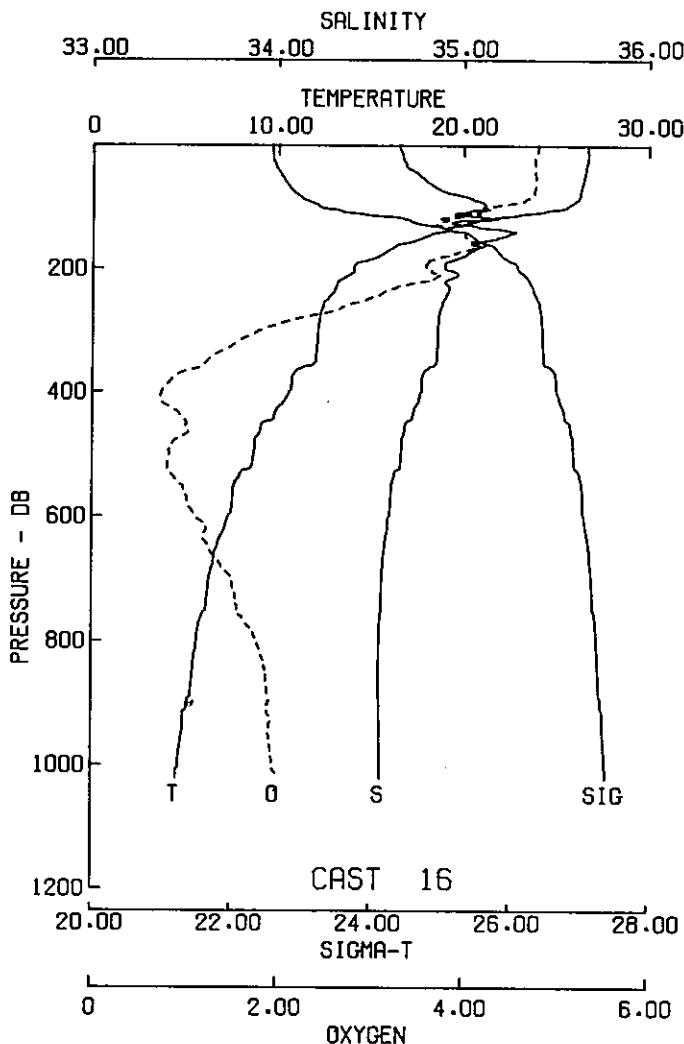


CAST CONRAD-R2-015 DATE 27 SEP R2 TIME 0225 GMT  
 LAT 00° 00'.0N LONG 124° 59.9W WEATHER SEA STATE 4  
 BAROMETER 126 WIND DTR 140 T SPD 08 KT VISIBILITY  
 CLOUD AMOUNT DRY WEI DEPTH M

PRES (DB)	TEMP (C)	SAL (PSU)	OXY (ML/L)	SIG-T	DELTA-E (DYN-M)
0.	26.795	34.734	4.76	22.600	0.000
10.	26.790	34.731	4.76	22.598	0.050
20.	26.790	34.728	4.76	22.596	0.100
30.	26.740	34.734	4.77	22.516	0.210
40.	26.580	34.734	4.78	22.589	0.260
50.	26.500	34.790	4.78	22.744	0.340
60.	26.340	34.875	4.78	22.850	0.410
70.	26.044	34.930	4.78	22.985	0.460
80.	25.019	34.978	4.78	23.060	0.520
90.	25.952	35.025	4.78	23.101	0.550
100.	25.929	35.078	4.78	23.142	0.600
110.	25.964	35.104	4.78	23.225	0.640
120.	25.524	35.034	3.92	23.574	0.720
130.	24.523	35.092	3.92	24.011	0.770
140.	22.683	35.092	3.92	24.548	0.820
150.	21.114	35.224	3.92	25.188	0.870
160.	18.999	35.198	4.17	25.420	0.780
170.	17.867	35.140	4.17	25.656	0.812
180.	16.303	34.945	4.17	25.867	0.854
190.	15.574	35.007	4.17	25.919	0.904
200.	15.469	35.044	4.17	26.293	0.954
250.	13.177	34.901	4.17	26.441	1.024
300.	12.372	34.879	4.17	26.482	1.077
350.	12.097	34.863	4.17	26.688	1.147
400.	11.686	34.782	4.98	26.838	1.207
450.	9.394	34.703	4.98	26.978	1.267
500.	8.259	34.646	4.98	27.017	1.317
550.	7.893	34.627	4.98	27.046	1.347
600.	7.601	34.609	1.05	27.075	1.377
650.	6.961	34.585	1.21	27.115	1.447
700.	6.675	34.575	1.44	27.149	1.554
750.	6.333	34.562	1.57	27.185	1.605
800.	6.925	34.555	1.73	27.232	1.654
850.	5.956	34.549	1.91	27.293	1.700
900.	4.153	34.553	1.99	27.324	1.743
950.	4.991	34.555	2.00	27.345	1.786
1000.	4.727	34.557	2.02	27.377	1.827
1012.	4.682	34.559	2.02	27.383	

CAST CONRAD-82-016 DATE 28 SEP 82 TIME 1030 GMT  
LAT 00 00.0N LONG 119 06.6W

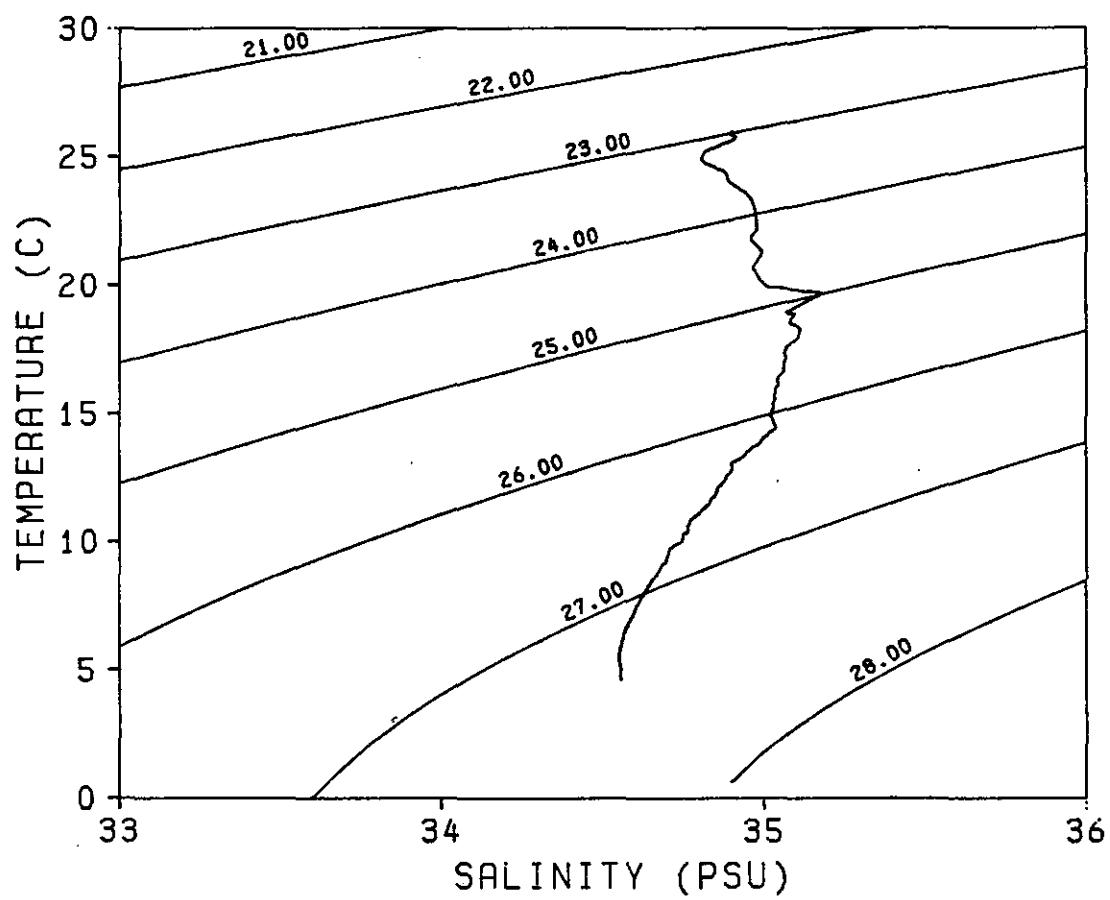


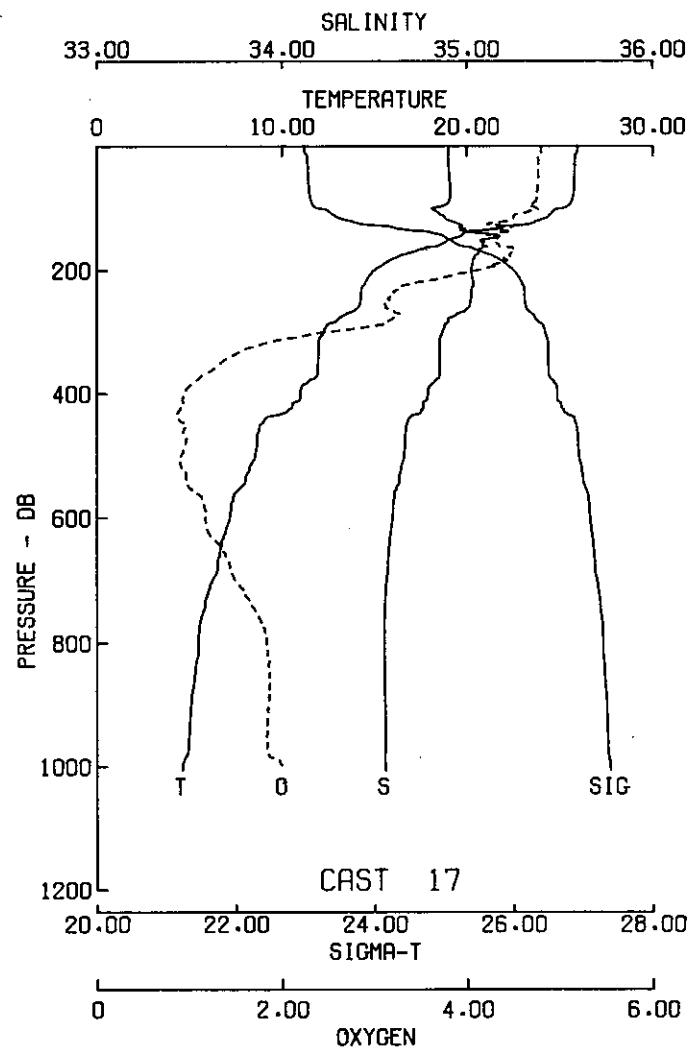


CAST CONRAD-82-016 DATE 28 SEP 82 TIME 1030 GMT  
 LAT 00 00.0N LONG 119 06.6W WEATHER SEA STATE  
 BAROMETER 1013 WIND DIR 150 T SPD 05 KT VISIBILITY  
 CLOUD AMOUNT DRY WET DEPTH

PRES (DB)	TEMP (C)	SAL (PSU)	OXY (ML/L)	SIG-T	DELTA-D (DYN-M)
0.	26.680	34.654	4.86	22.577	0.080
10.	25.686	34.562	4.79	22.564	0.105
20.	26.695	34.571	4.76	22.587	0.125
30.	26.687	34.686	4.77	22.520	0.225
40.	26.684	34.722	4.77	22.566	0.225
50.	26.681	34.766	4.78	22.714	0.314
60.	26.679	34.814	4.77	22.774	0.414
70.	26.676	34.864	4.77	22.846	0.496
80.	26.674	34.914	4.75	22.950	0.496
90.	26.673	35.064	4.65	23.108	0.511
100.	26.673	35.164	4.24	23.273	0.511
110.	26.374	34.955	4.18	23.804	0.611
120.	26.245	35.140	3.83	24.554	0.692
130.	26.834	35.061	3.75	24.870	0.711
140.	26.736	35.262	3.95	25.329	0.751
150.	26.731	35.188	4.03	25.498	0.780
160.	26.491	35.038	4.35	25.680	0.797
170.	26.943	35.056	4.03	25.820	0.797
180.	26.412	34.993	3.77	25.890	0.772
190.	26.284	34.905	3.65	26.070	0.826
200.	26.069	34.904	3.61	26.110	0.826
210.	26.770	34.894	3.96	26.400	0.882
220.	26.171	34.865	4.04	26.487	0.905
230.	26.053	34.858	4.24	26.585	0.947
240.	26.616	34.772	4.70	26.885	1.124
250.	26.158	34.688	5.07	27.024	1.341
260.	26.704	34.667	5.07	27.041	1.341
270.	26.667	34.615	5.12	27.076	1.341
280.	26.537	34.502	5.27	27.145	1.422
290.	26.732	34.580	5.51	27.187	1.472
300.	26.337	34.565	5.57	27.207	1.521
310.	26.151	34.561	5.79	27.263	1.568
320.	26.657	34.552	5.88	27.286	1.614
330.	26.462	34.551	5.92	27.325	1.654
340.	26.156	34.554	5.92	27.357	1.700
350.	26.885	34.556	5.95	27.380	1.741
360.	26.720	34.558	5.99	27.397	
370.	26.564	34.560			

CAST CONRAD-82-017 DATE 29 SEP 82 TIME 1915 GMT  
LAT 00 00.0N LONG 115 00.0W

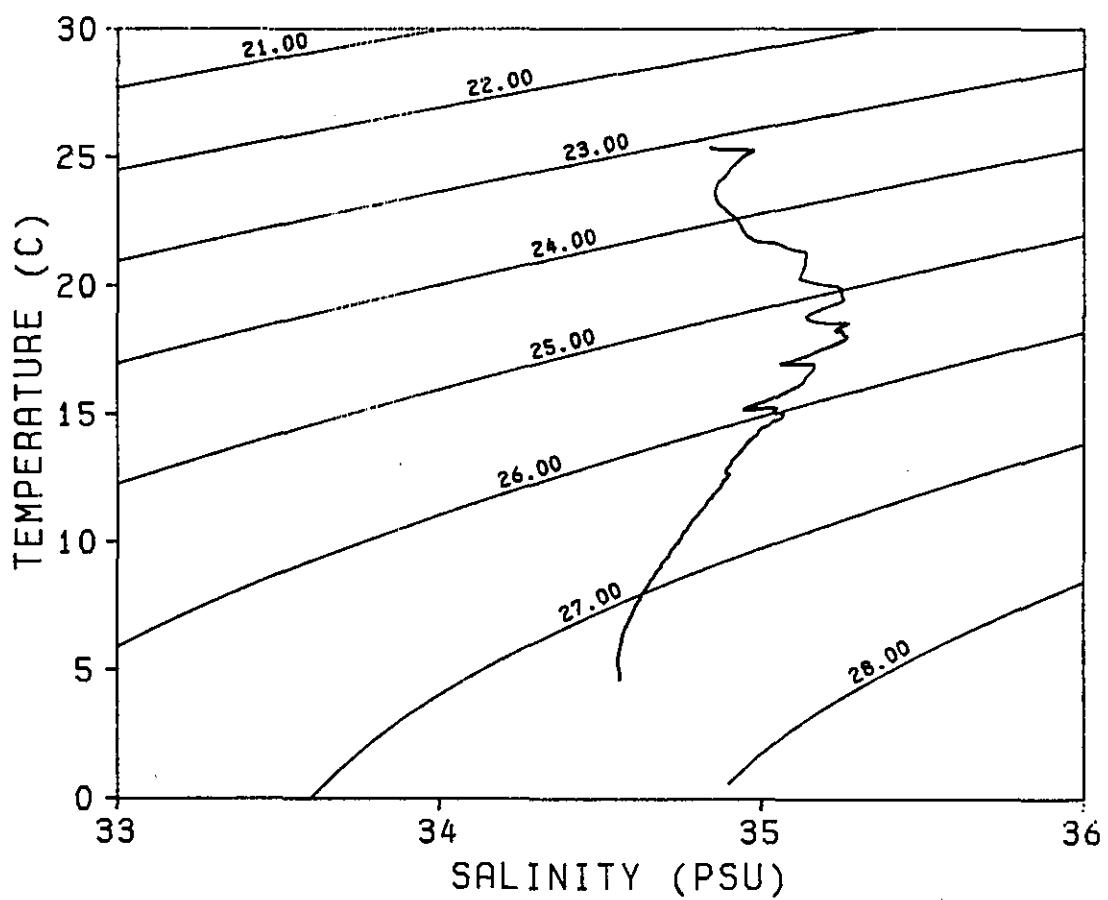


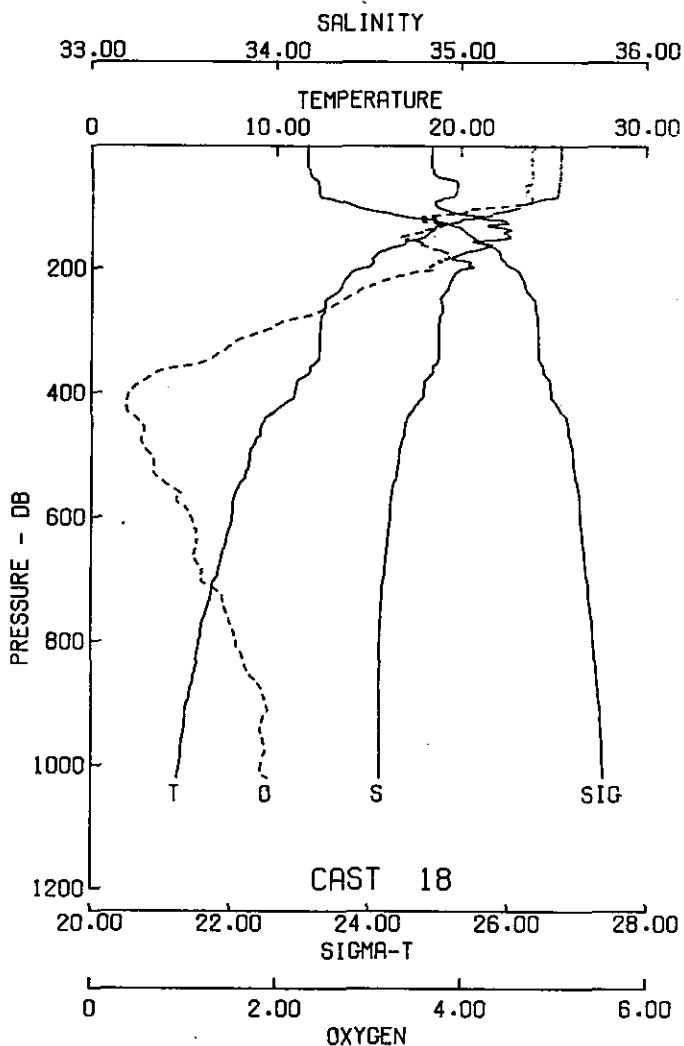


CAST CCNRAO-R2-017 DATE 29 SEP R2  
LAT 00°30'N LONG 115°00'W WEATHER SEA STATE 3  
BAROMETER 12 WIND DIR 115 T SPD 10 KT VISIBILITY  
CLOUD AMOUNT DRY WE1 DEPTH M

PRES (DB)	TFMP (C)	SAL (PSU)	OXY (ML/L)	SIG-T	DELTA-T (DYN/M)
0 •	25.968	34.905	4.80	22.989	0.000
100 •	25.959	34.898	4.80	22.988	0.049
200 •	25.812	34.899	4.77	23.034	0.047
300 •	25.706	34.902	4.77	23.032	0.146
400 •	25.600	34.904	4.77	23.041	0.196
500 •	25.501	34.907	4.77	23.044	0.267
600 •	25.487	34.905	4.77	23.053	0.291
700 •	25.770	34.911	4.77	23.057	0.340
800 •	25.728	34.912	4.74	23.071	0.388
900 •	25.624	34.903	4.76	23.096	0.437
1000 •	25.164	34.816	4.75	23.171	0.487
1100 •	24.504	34.855	4.54	23.399	0.531
1200 •	23.930	34.910	4.40	23.642	0.577
1300 •	21.847	34.958	4.30	24.246	0.617
1400 •	19.885	35.049	4.30	24.846	0.656
1500 •	19.133	35.100	4.34	25.081	0.694
1600 •	18.501	35.081	4.34	25.226	0.730
1700 •	17.144	35.069	4.51	25.549	0.767
1800 •	16.170	35.045	4.45	25.758	0.788
1900 •	15.490	35.021	4.33	25.906	0.825
2000 •	15.006	35.021	4.13	26.004	0.863
2100 •	14.250	35.021	3.15	26.167	0.901
2200 •	12.258	35.069	5.14	26.456	0.939
2300 •	11.942	34.852	1.34	26.834	1.000
2400 •	10.989	34.789	0.95	26.980	1.015
2500 •	8.880	34.675	0.91	26.940	1.022
2600 •	8.553	34.660	0.99	27.023	1.038
2700 •	7.782	34.622	1.17	27.097	1.042
2800 •	7.175	34.597	1.35	27.153	1.046
2900 •	6.649	34.574	1.50	27.199	1.049
3000 •	6.231	34.564	1.72	27.256	1.053
3100 •	5.721	34.553	1.83	27.286	1.057
3200 •	5.470	34.551	1.85	27.308	1.061
3300 •	5.292	34.553	1.85	27.330	1.065
3400 •	5.072	34.553	1.83	27.350	1.069
3500 •	4.971	34.557	1.83	27.340	1.071
3600 •	4.612	34.557	2.01	27.390	1.076
3700 •	4.611	34.558	2.01	27.390	1.076

CAST CONRAD-82-018 DATE 01 OCT 82 TIME 0807 GMT  
LAT 0 02.0S LONG 109 34.1W

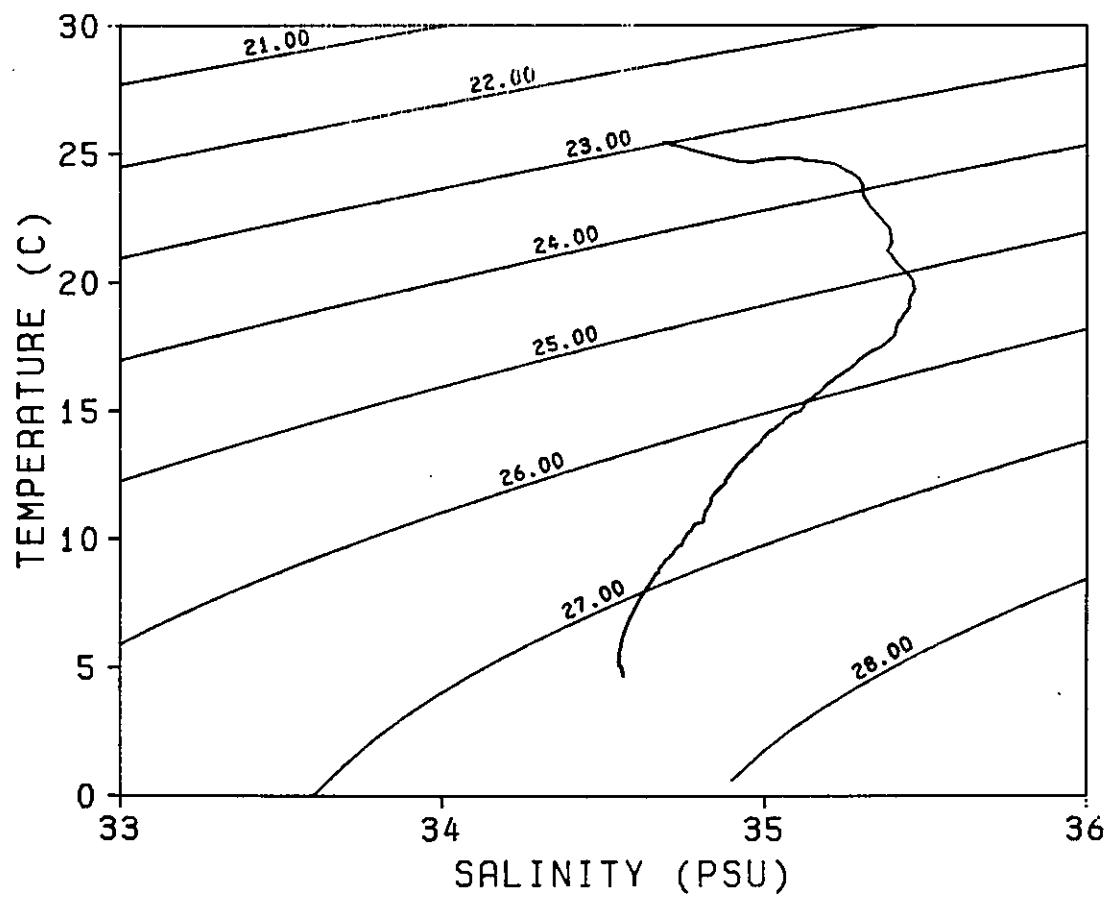


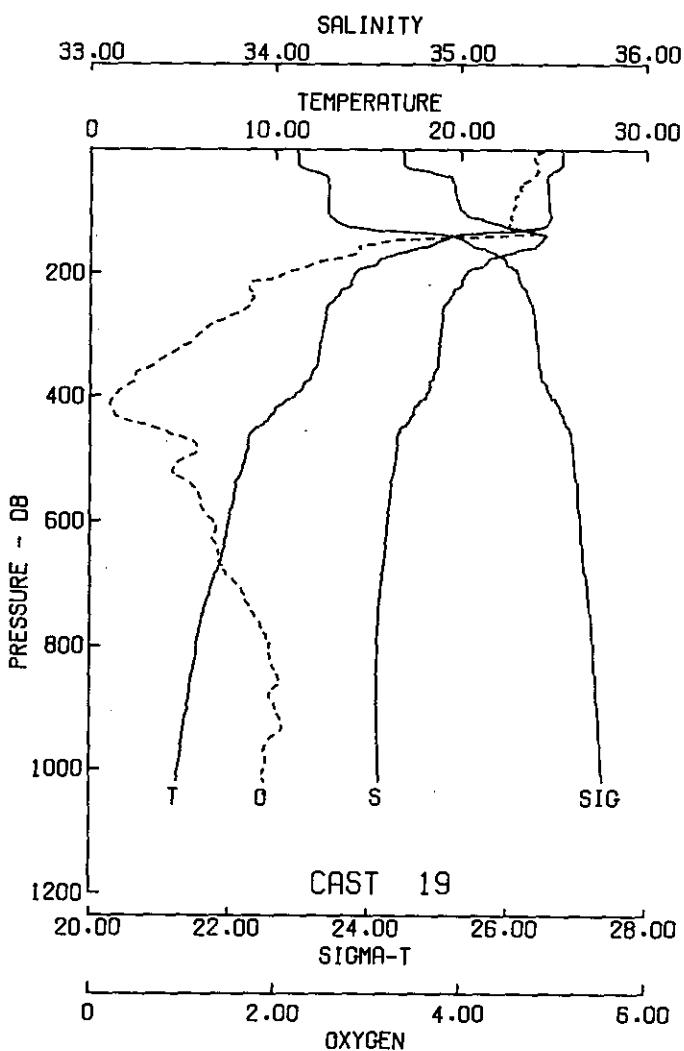


CAST CCNRAD-B2-018 DATE 01 OCT 82 TIME 0807 GMT  
 LAT 0 02.0S LONG 109 34.1W WEATHER SEA STATE  
 BAROMETER 1013 WIND DIR 140 T SPD 13 KT VISIBILITY  
 CLOUD AMOUNT DRY WET DEPTH M

PRES (DB)	TEMP (C)	SAL (PSU)	OXY (ML/L)	SIG-T	DELTA-D (DYN-M)
0.	25.377	34.844	4.83	23.127	0.000
10.	25.375	34.844	4.76	23.125	.048
20.	25.388	34.844	4.76	23.123	.095
30.	25.379	34.844	4.76	23.120	.143
40.	25.329	34.845	4.77	23.142	.190
50.	25.297	34.865	4.77	23.167	.238
60.	25.246	34.976	4.78	23.266	.288
70.	25.208	34.974	4.78	23.277	.331
80.	25.161	34.964	4.79	23.284	.377
90.	25.995	34.864	4.79	23.558	.428
100.	25.994	34.875	4.79	23.828	.465
110.	21.714	34.980	3.93	24.300	.503
120.	20.113	35.161	3.75	24.871	.540
130.	18.773	35.158	3.65	25.201	.579
140.	18.317	35.232	3.55	25.398	.612
150.	17.878	35.255	3.55	25.514	.645
160.	16.954	35.161	3.55	25.660	.678
170.	15.989	35.074	3.55	25.850	.709
180.	15.310	34.976	3.55	25.897	.713
190.	15.271	35.051	3.55	25.968	.734
200.	14.519	35.016	3.55	26.106	.762
250.	12.689	34.890	3.55	26.387	.822
300.	12.374	34.879	3.55	26.441	.841
350.	12.188	34.872	3.55	26.471	.893
400.	11.015	34.798	3.49	26.534	1.072
450.	9.237	34.696	3.49	26.551	1.142
500.	8.577	34.664	3.49	26.941	1.204
550.	7.988	34.633	3.49	27.007	1.264
600.	7.516	34.615	3.49	27.049	1.321
650.	7.197	34.600	3.49	27.096	1.376
700.	6.696	34.583	3.49	27.152	1.426
750.	6.235	34.568	3.49	27.202	1.470
800.	5.861	34.563	3.49	27.246	1.527
850.	5.577	34.555	3.49	27.277	1.573
900.	5.155	34.555	3.49	27.327	1.617
950.	4.971	34.560	3.49	27.351	1.660
1000.	4.782	34.562	3.49	27.375	1.701
1020.	4.655	34.561	3.49	27.386	

CAST CONRAD-82-019 DATE 02 OCT 82 TIME 0432 GMT  
LAT 1 00.1S LONG 106 46.5W

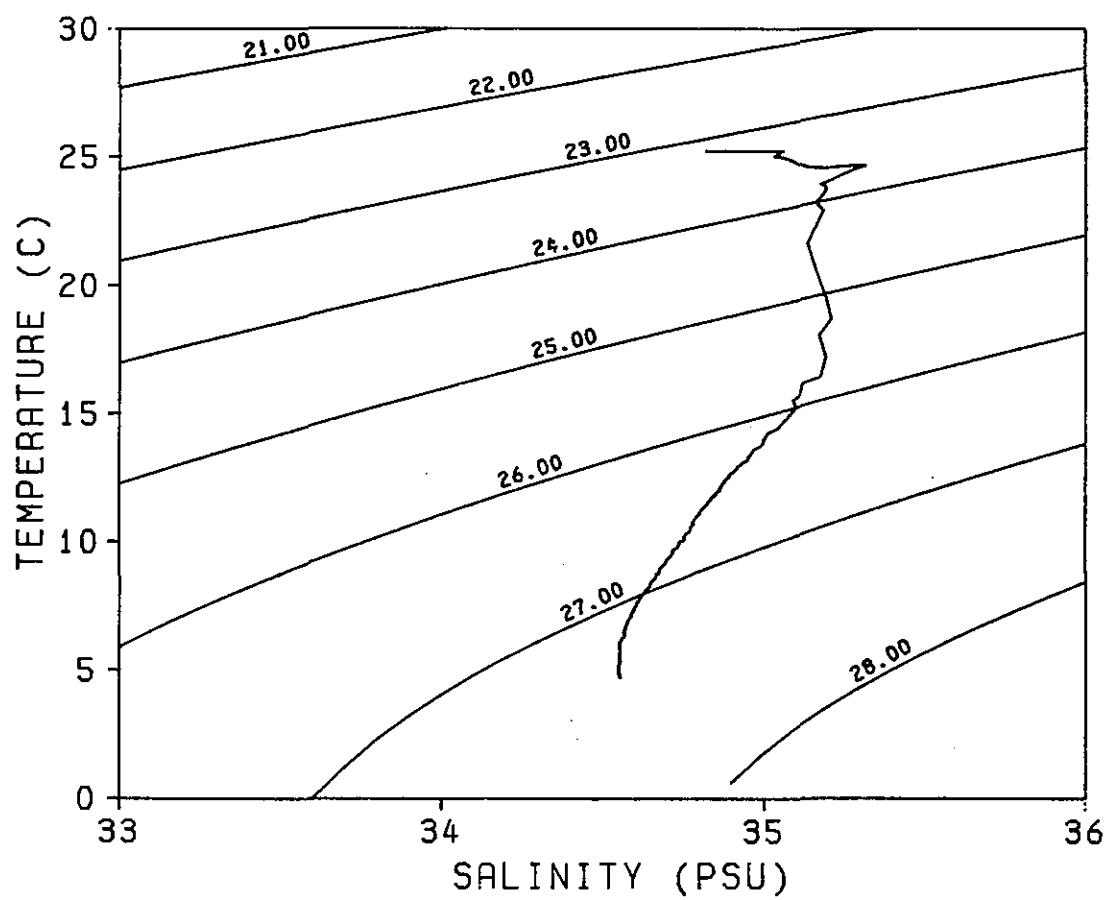




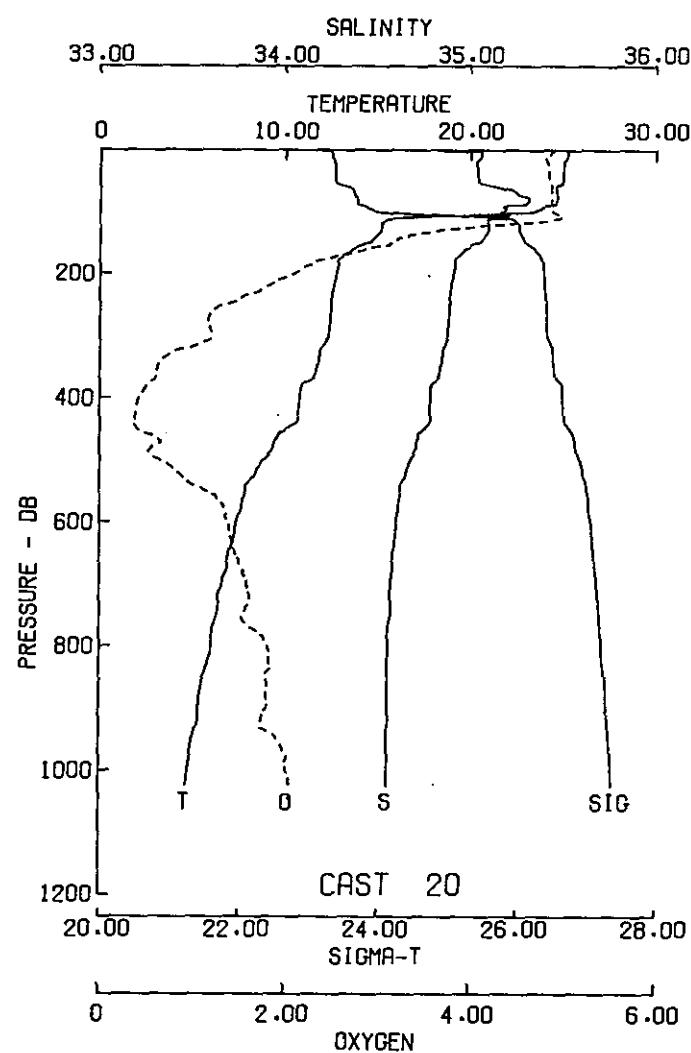
CAST CONRAD-82-019 DATE 02 OCT 82 TIME 0432 GMT  
 LAT 1°39'1"S LONG 106°46.5"W WEATHER SEA STATE  
 BAROMETER 14 WIND DIR 146 T SPD 15 KT VISIBILITY  
 CLOUD AMOUNT DRY WET DEPTH =

PRES (DB)	TEMP (C)	SAL (PSU)	OXY (ML/L)	SIG-T	DELTA-P (DYN-M)
0.	25.448	34.687	4.88	22.987	0.000
10.	25.474	34.691	4.822	22.982	0.040
20.	25.478	34.691	4.811	22.981	0.040
30.	25.325	34.722	4.837	23.053	0.147
40.	24.804	34.888	4.811	23.334	0.194
50.	24.676	34.955	4.703	23.423	0.230
60.	24.692	34.963	4.635	23.425	0.284
70.	24.705	34.969	4.635	23.425	0.320
80.	24.719	34.974	4.636	23.425	0.410
90.	24.765	34.995	4.597	23.428	0.464
100.	24.804	35.011	4.567	23.444	0.550
110.	24.851	35.058	4.533	23.592	0.620
120.	24.679	35.179	4.605	24.038	0.690
130.	23.513	35.308	4.411	25.210	0.750
140.	19.704	35.463	3.17	25.438	0.820
150.	18.708	35.427	3.17	25.649	0.880
160.	17.719	35.381	3.17	25.843	0.940
170.	16.444	35.237	2.83	25.984	0.977
180.	15.534	35.149	2.83	26.077	1.044
190.	14.982	35.110	2.44	26.158	1.100
200.	14.340	35.036	2.15	26.353	1.160
2250.	12.977	34.921	1.72	26.418	1.27
300.	12.553	34.895	1.17	26.462	1.34
350.	12.272	34.881	0.68	26.538	1.42
400.	11.659	34.815	0.26	26.890	1.476
450.	8.997	34.686	0.01	26.960	1.526
500.	8.379	34.652	1.14	27.021	1.594
550.	7.852	34.624	1.33	27.059	1.651
600.	7.591	34.607	1.38	27.097	1.458
650.	7.161	34.594	1.53	27.157	1.508
700.	6.603	34.572	1.78	27.233	1.555
750.	6.105	34.560	1.94	27.252	1.602
800.	5.761	34.554	2.04	27.283	1.646
850.	5.492	34.551	2.01	27.308	1.689
900.	5.291	34.553	0.96	27.342	1.731
950.	5.036	34.558	0.89	27.372	1.773
1000.	4.807	34.562	0.89	27.387	
1021.	4.668	34.562	1.29		

CAST CONRAD-82-020 DATE 03 OCT 82 TIME 0026 GMT  
LAT 1 59.7S LONG 103 54.6W



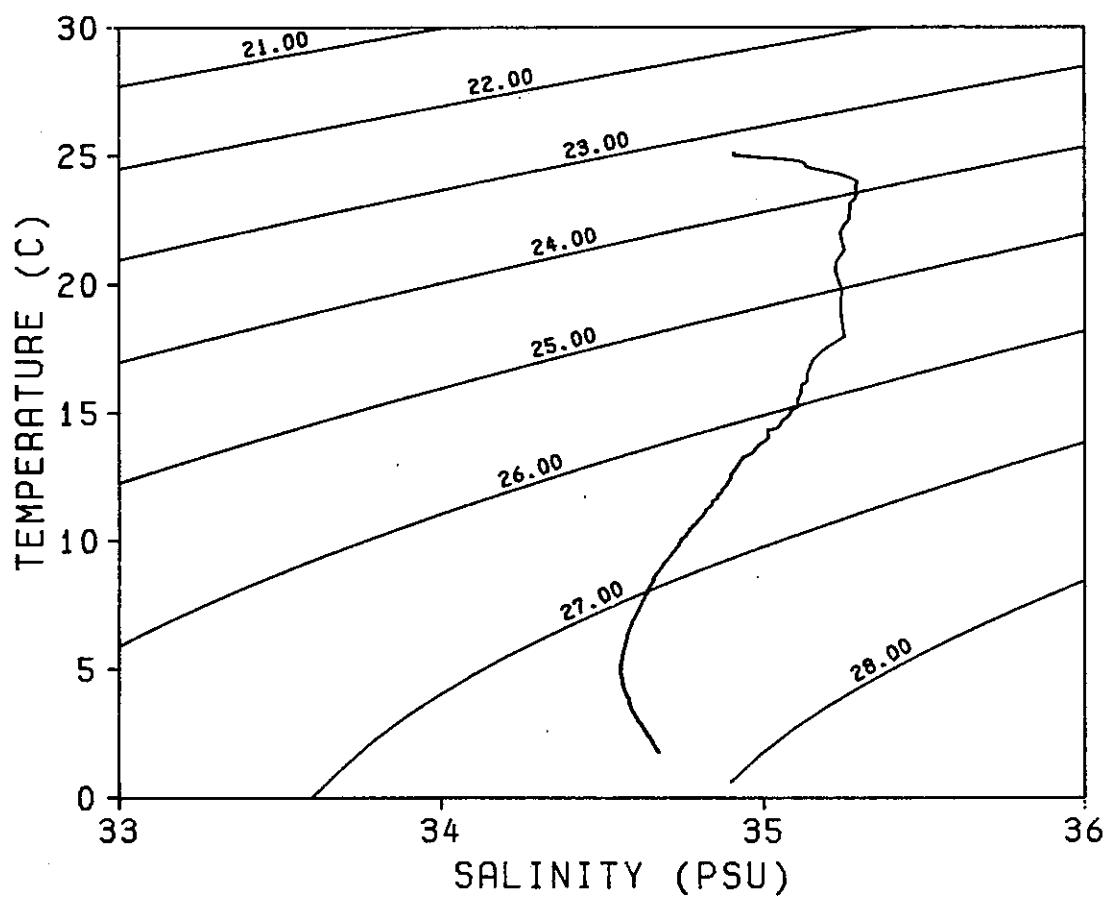
SL



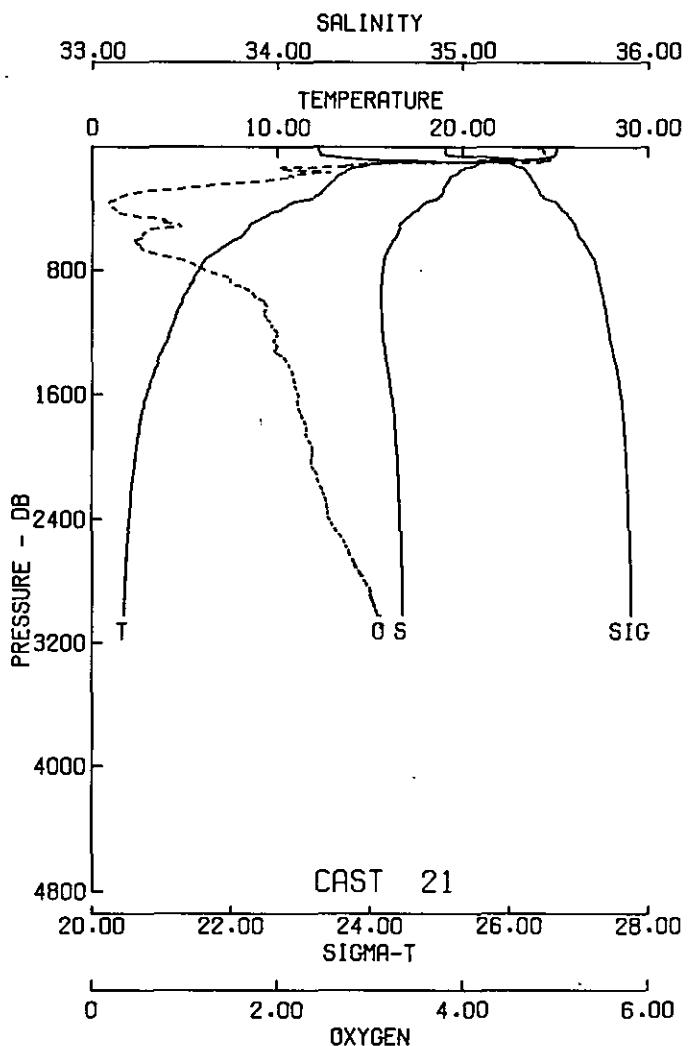
CAST CONRAD-82-020 DATE 03 OCT 82 TIME 0026 GMT  
 LAT 1 59.7S LONG 103 54.6W WEATHER SEA STATE  
 BAROMETER 09 WIND DIR 165 T SPD 17 KT VISIBILITY  
 CLOUD AMOUNT DRY WET DEPTH M

PRES DB	TEMP °C	SAL (PSU)	OXY (ML/L)	SIG-T	DELTA-P (DYN-M)
0.	25.232	34.822	4.90	23.155	0.000
10.	25.204	34.057	4.85	23.339	.046
20.	25.032	35.034	4.82	23.376	.091
30.	25.025	34.046	4.84	23.382	.137
40.	25.006	34.038	4.85	23.387	.182
50.	24.567	34.044	4.86	23.390	.227
60.	24.544	34.135	4.87	23.398	.272
70.	24.666	34.245	4.88	23.652	.315
80.	24.315	34.315	4.88	23.700	.357
90.	23.390	34.175	4.88	23.752	.400
100.	16.420	34.094	4.97	25.802	.447
110.	16.167	34.076	4.45	25.925	.473
120.	15.136	34.053	3.57	26.031	.514
130.	14.900	34.076	3.33	26.070	.534
140.	14.574	34.053	3.15	26.122	.554
150.	13.646	34.077	2.88	26.262	.572
160.	13.122	34.046	2.62	26.343	.590
170.	12.868	34.021	2.36	26.374	.607
180.	12.617	34.015	2.19	26.381	.624
190.	12.747	34.009	2.11	26.390	.641
200.	12.461	34.088	1.37	26.431	.726
210.	12.354	34.087	1.22	26.444	.809
220.	11.797	34.084	0.6	26.538	.896
230.	10.012	34.078	0.43	26.664	.966
240.	8.780	34.068	0.43	26.773	1.030
250.	7.869	34.062	0.66	26.922	1.100
260.	7.388	34.060	1.18	27.017	1.164
270.	6.961	34.058	1.38	27.071	1.220
280.	6.611	34.057	1.46	27.117	1.274
290.	6.315	34.057	1.50	27.156	1.325
300.	5.002	34.055	1.54	27.193	1.377
310.	5.575	34.055	1.81	27.223	1.427
320.	5.368	34.055	1.81	27.276	1.477
330.	4.999	34.055	1.81	27.303	1.517
340.	4.778	34.055	2.02	27.342	1.561
350.	4.778	34.055	2.04	27.369	1.603
360.	4.685	34.055	2.04	27.381	

CAST CONRAD-82-021 DATE 03 OCT 82 TIME 2359 GMT  
LAT 259.8S LONG 101 02.6W



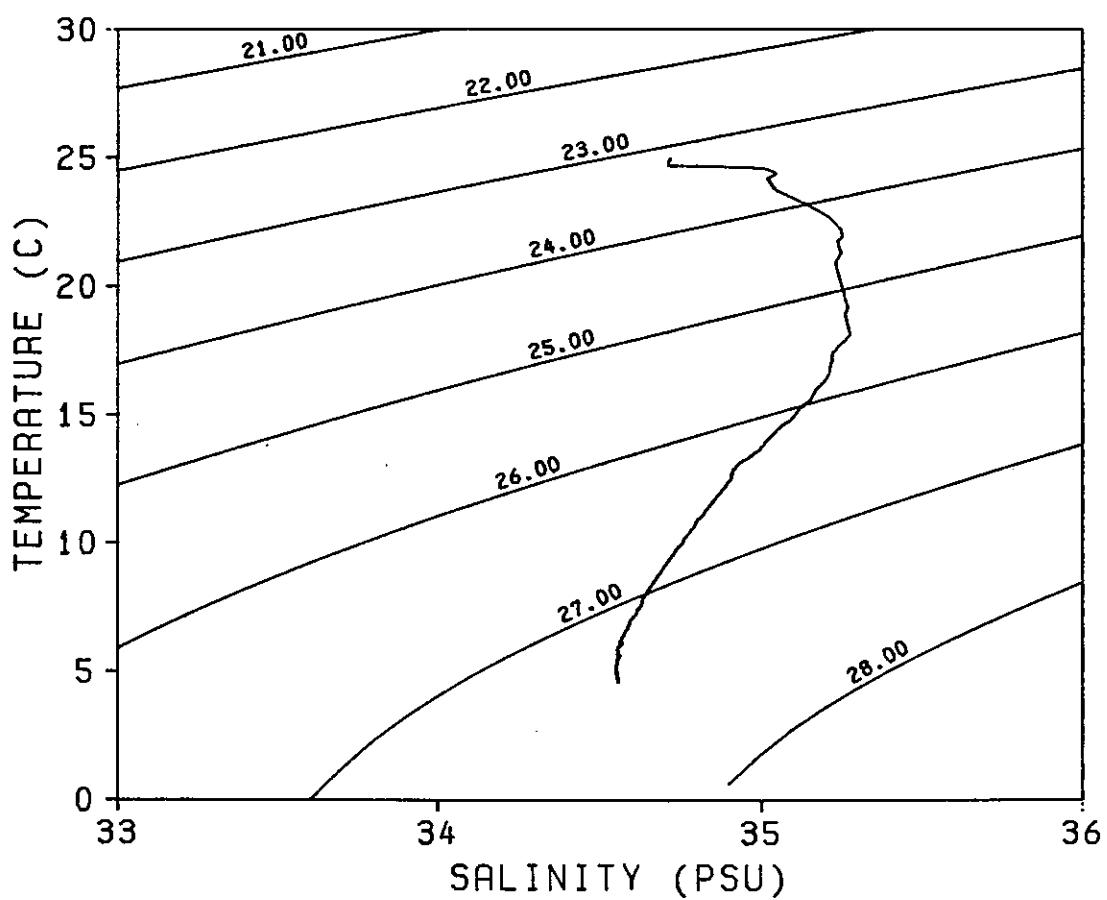
77

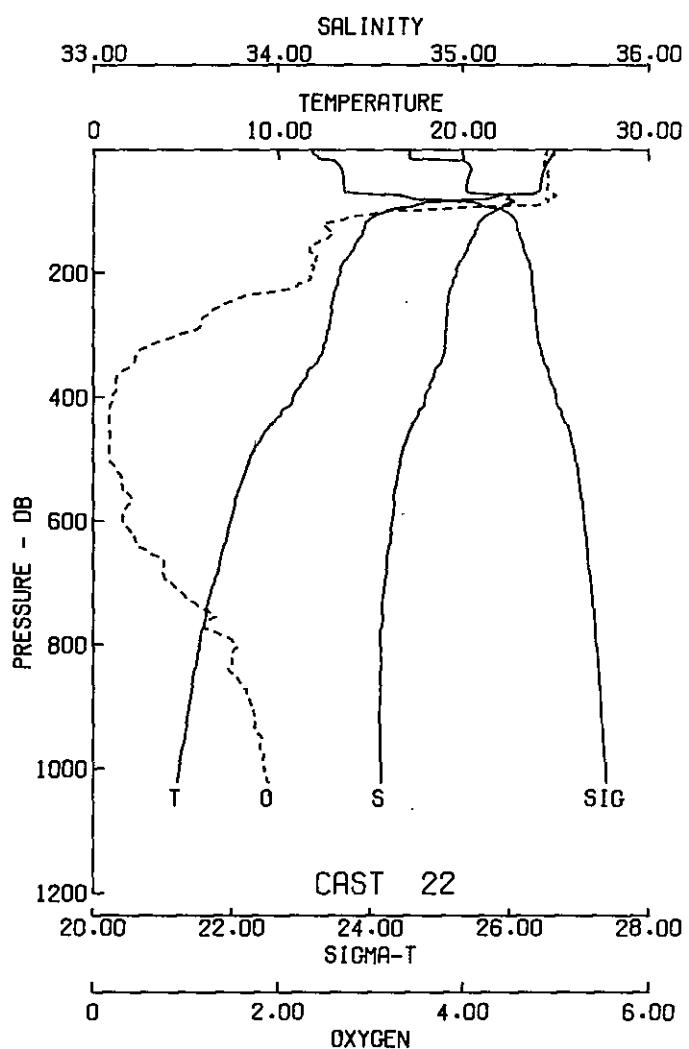


CAST CONRAD-82-021 DATE 03 OCT 82 TIME 2359 GMT  
 LAT 2 59.8S LONG 101 02.6W WEATHER SEA STATE 4  
 BAROMETER 101 WIND DIP 120 T SPD 06 KT VISIBILITY  
 CLOUD AMOUNT DRY WET DEPTH 3330 M

PRES (DB)	TEMP (C)	SAT (PSU)	OXY (ML/L)	SIG-T	DELTA-D (DYN-M)
0.	25.097	34.910	4.87	23.262	0.000
10.	25.099	34.909	4.86	23.261	0.042
20.	25.099	34.910	4.86	23.262	0.093
30.	25.099	34.909	4.87	23.264	0.139
40.	25.099	34.910	4.88	23.286	0.187
50.	25.099	34.911	4.88	23.286	0.231
60.	24.943	34.973	4.90	23.355	0.277
70.	24.644	35.131	4.93	23.566	0.322
80.	24.062	35.279	4.95	23.852	0.364
90.	32.370	36.250	4.95	24.334	0.403
100.	17.470	36.189	4.96	25.561	0.435
110.	15.151	35.094	3.19	26.030	0.456
120.	14.992	35.078	2.79	26.073	0.477
130.	14.992	35.052	2.74	26.134	0.496
140.	14.992	35.014	2.04	26.213	0.515
150.	13.733	34.993	2.11	26.240	0.533
160.	13.733	34.986	2.42	26.255	0.552
170.	13.733	34.977	2.50	26.272	0.571
180.	15.457	34.967	2.20	26.292	0.588
190.	13.309	34.946	2.12	26.306	0.606
200.	13.193	34.934	2.16	26.320	0.623
210.	12.756	34.910	1.29	26.390	0.710
220.	12.410	34.895	4.8	26.447	0.795
230.	11.361	34.837	2.4	26.601	0.876
240.	10.306	34.760	2.4	26.735	0.945
250.	9.404	34.710	4.4	26.847	1.015
260.	8.584	34.664	8.4	26.940	1.079
270.	8.261	34.657	6.0	26.981	1.139
280.	7.811	34.630	5.0	27.034	1.197
290.	7.115	34.607	5.2	27.114	1.252
300.	6.503	34.585	6.6	27.180	1.304
310.	5.997	34.573	8.5	27.238	1.353
320.	5.772	34.573	2.1	27.262	1.400
330.	5.507	34.564	4.6	27.291	1.444
340.	5.201	34.564	5.4	27.314	1.488
350.	5.114	34.560	7.7	27.335	1.532
360.	4.881	34.559	8.5	27.361	1.574
370.	4.215	34.602	1.7	27.570	1.942
380.	2.445	34.649	3.7	27.684	2.226
390.	1.928	34.667	6.7	27.732	2.477
400.	1.749	34.578	9.6	27.755	2.716
323.	1.730	34.678	1.26	27.756	

CAST CONRAD-82-022 DATE 04 OCT 82 TIME 2027 GMT  
LAT 4 00.0S LONG 098 03.1W

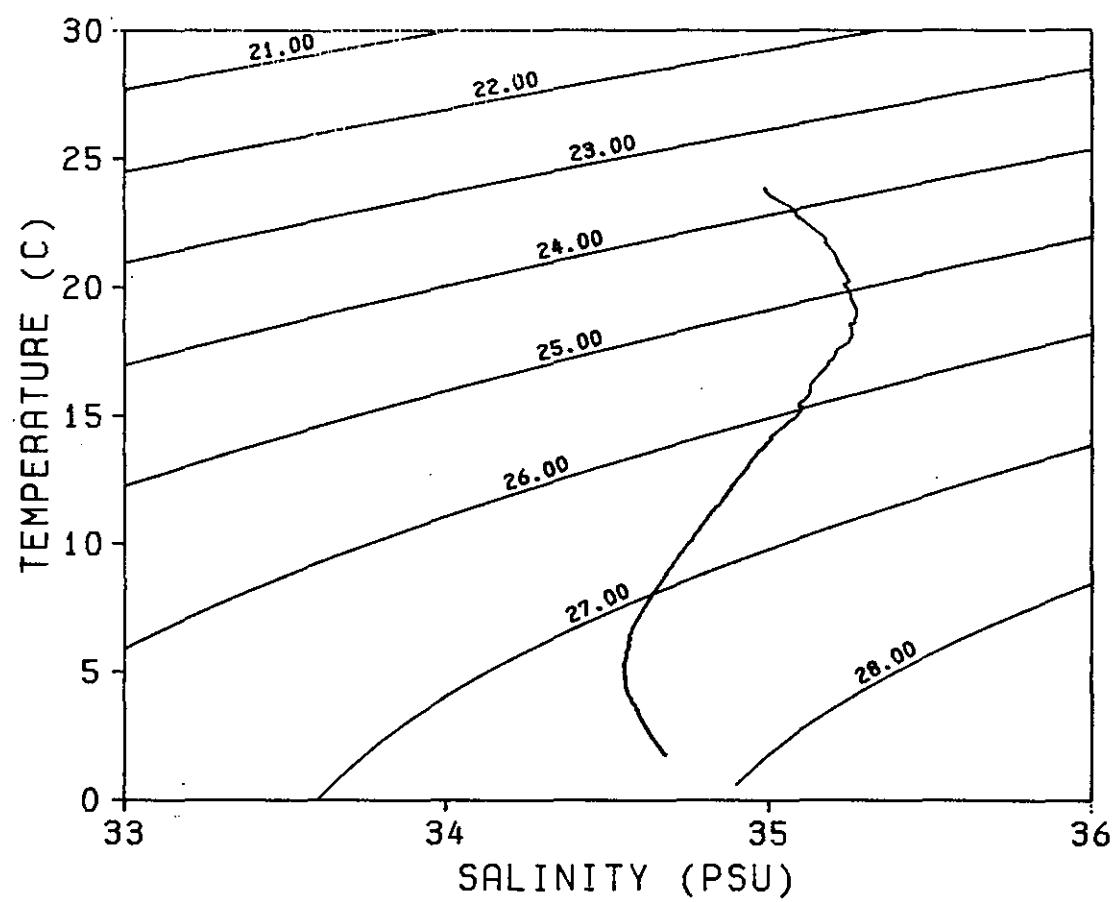


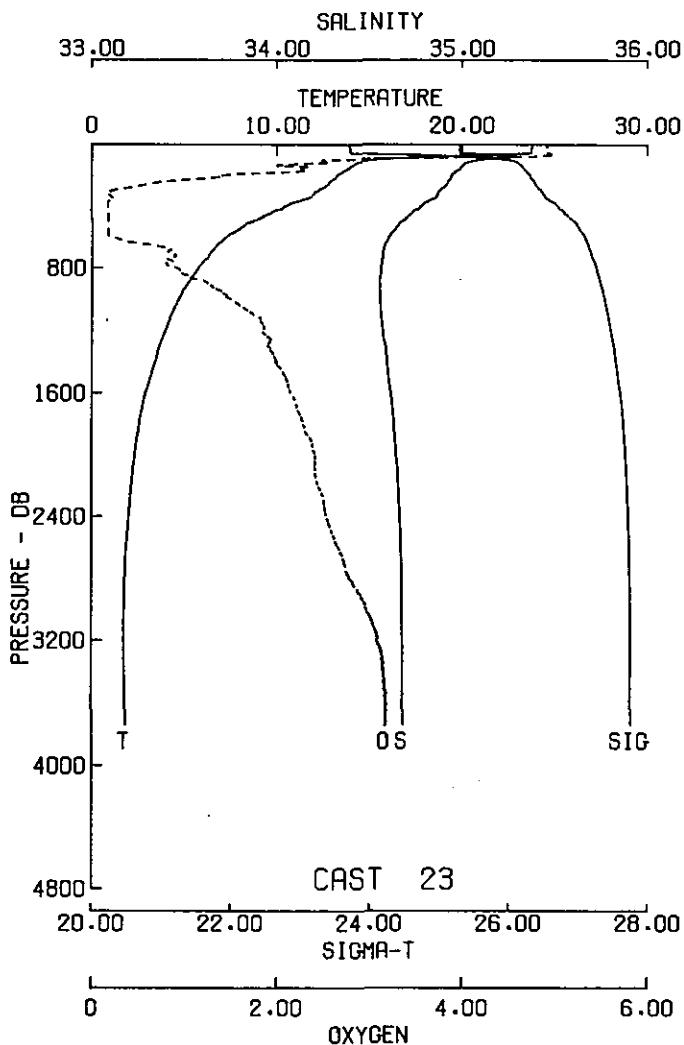


CAST CONRAD-82-022 DATE 04 OCT 82 TIME 2027 GMT  
 LAT 4 00.0S LONG 098 03.1W WEATHER SEA STATE  
 BAROMETER 11 WIND DIR 132 T SPD 06 KT VISIBILITY  
 CLOUD AMOUNT DRY WET DEPTH M

PRES (DB)	TEMP (C)	SAL (PSU)	OXY (ML/L)	SIG-T	DELTA-D (DYN/M)
0.	24.966	34.715	4.90	23.155	0.000
10.	24.764	34.708	4.89	23.211	0.047
20.	24.553	35.008	4.88	23.499	0.093
30.	24.395	35.044	4.90	23.575	0.136
40.	24.273	35.035	4.91	23.605	0.180
50.	24.210	35.025	4.92	23.616	0.223
60.	24.181	35.021	4.91	23.621	0.266
70.	23.955	35.020	4.93	23.695	0.309
80.	21.310	35.251	4.90	24.517	0.345
90.	17.438	35.227	4.77	25.599	0.373
100.	15.872	35.166	3.27	25.921	0.396
110.	15.094	35.114	2.75	26.056	0.416
120.	14.727	35.084	2.51	26.113	0.435
130.	14.670	35.077	2.55	26.119	0.455
140.	14.598	35.050	2.50	26.142	0.474
150.	14.263	35.039	4.03	26.178	0.493
160.	14.120	35.026	3.34	26.199	0.512
170.	13.900	35.011	3.38	26.233	0.531
180.	13.590	34.992	4.02	26.284	0.540
190.	13.396	34.970	2.39	26.307	0.567
200.	13.342	34.962	2.37	26.312	0.584
250.	12.916	34.916	2.41	26.364	0.672
300.	12.638	34.904	1.90	26.408	0.759
350.	11.893	34.866	4.1	26.524	0.842
400.	10.801	34.795	2.00	26.670	0.918
450.	9.444	34.718	1.60	26.844	0.988
500.	8.499	34.665	1.00	25.955	1.051
550.	7.879	34.634	1.00	27.025	1.109
600.	7.439	34.619	0.60	27.077	1.165
650.	6.979	34.594	0.60	27.122	1.219
700.	6.561	34.580	0.85	27.168	1.270
750.	6.099	34.561	1.27	27.214	1.319
800.	5.764	34.556	1.55	27.253	1.367
850.	5.442	34.556	1.53	27.292	1.412
900.	5.215	34.551	1.74	27.316	1.457
950.	4.971	34.553	1.82	27.346	1.500
1000.	4.667	34.556	1.85	27.383	1.541
1022.	4.566	34.557	1.91	27.395	

CAST CONRAD-82-023 DATE 05 OCT 82 TIME 1849 GMT  
LAT 4 59.2S LONG 095 02.3W

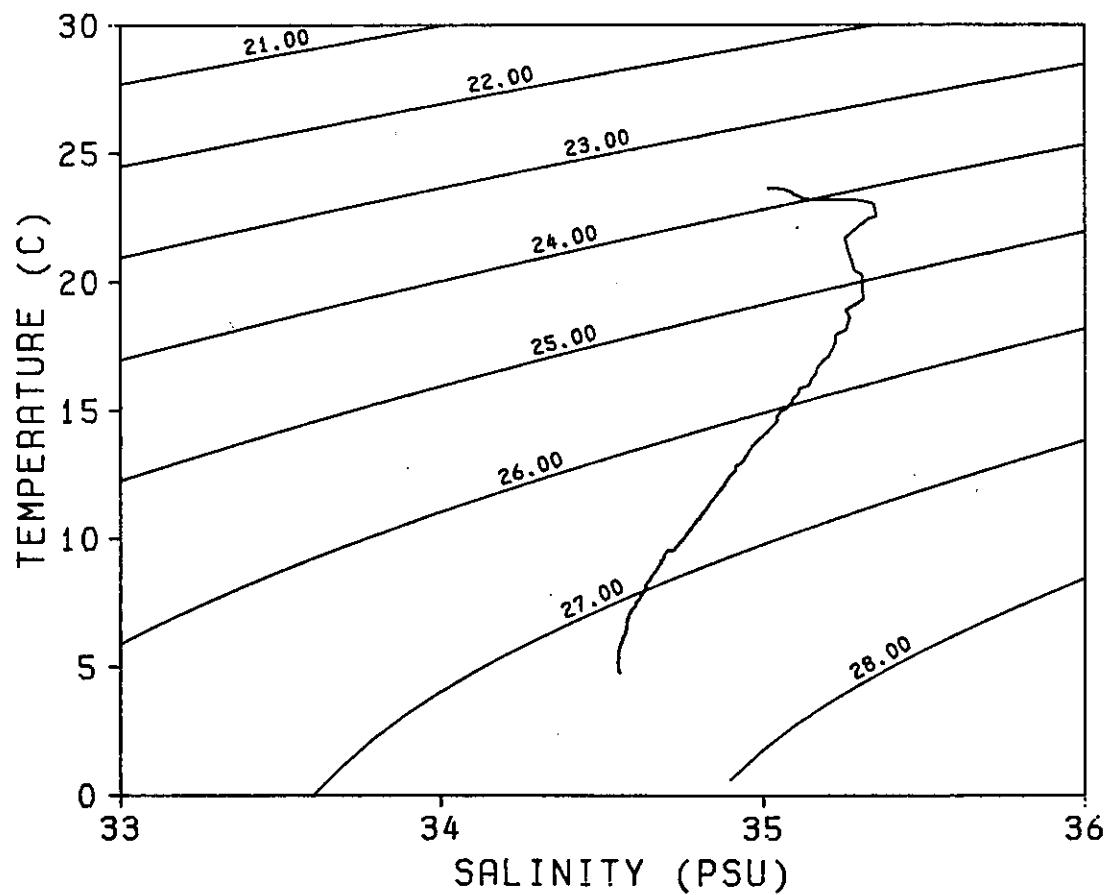




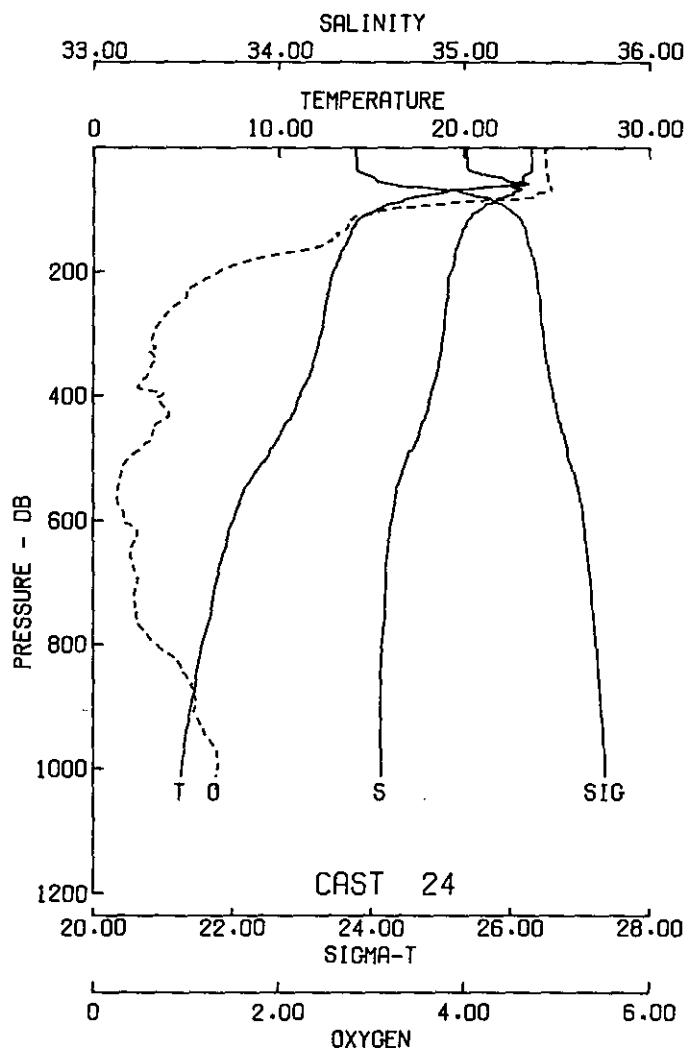
CAST CONRAD-82-023 DATE 05 OCT 82 TIME 1849 GMT  
 LAT 4° 59.2S LONG 095° 02.3W WEATHER SEA STATE 3  
 BAROMETER 1014 WIND DIR 105° T SPD 10 KT VISIBILITY  
 CLOUD AMOUNT DRY 27.0 WET 23.0 DEPTH M

PRES (DB)	TEMP (C)	SAL (PSU)	OXY (ML/L)	SIG-T	DELTA-D (DYN-M)
0.	23.842	34.989	4.92	23.698	0.000
10.	23.807	34.990	4.91	23.709	.042
20.	23.758	34.999	4.92	23.723	.084
30.	23.744	34.993	4.92	23.728	.126
40.	23.738	34.993	4.92	23.739	.168
50.	23.738	34.990	4.92	23.739	.210
60.	23.161	34.063	4.97	23.953	.252
70.	20.826	35.221	4.96	24.725	.298
80.	18.717	35.265	4.70	25.313	.318
90.	17.082	35.184	3.24	25.652	.343
100.	15.387	35.091	2.69	25.973	.365
110.	14.678	35.056	2.57	26.102	.385
120.	14.350	35.024	2.50	26.148	.404
130.	14.183	35.008	2.13	26.172	.423
140.	14.054	35.007	2.06	26.198	.442
150.	13.945	34.997	2.33	26.213	.461
160.	13.845	34.992	2.27	26.231	.479
170.	13.775	34.977	2.31	26.255	.497
180.	13.527	34.961	2.10	26.272	.516
190.	13.406	34.955	1.67	26.293	.534
200.	13.279	34.944	1.44	26.311	.551
250.	12.823	34.922	1.70	26.385	.639
300.	12.240	34.883	1.25	26.470	.723
350.	11.733	34.855	1.23	26.545	.804
400.	10.505	34.784	1.18	26.714	.879
450.	9.666	34.733	1.18	26.819	.948
500.	8.567	34.675	1.18	26.936	1.011
550.	7.963	34.637	1.18	27.015	1.070
600.	7.248	34.603	1.21	27.092	1.126
650.	6.768	34.581	1.62	27.141	1.178
700.	6.498	34.570	1.84	27.181	1.229
750.	6.339	34.565	1.86	27.225	1.278
800.	5.735	34.560	1.93	27.269	1.328
850.	5.473	34.558	1.63	27.291	1.371
900.	5.170	34.554	1.26	27.323	1.415
950.	4.893	34.555	1.41	27.357	1.457
1000.	4.680	34.556	1.51	27.382	1.498
1500.	3.173	34.602	2.10	27.573	1.855
2000.	2.333	34.644	2.41	27.681	2.138
2500.	1.948	34.668	2.40	27.731	2.388
3000.	1.773	34.678	2.96	27.753	2.623
3500.	1.789	34.681	3.17	27.754	2.859
3742.	1.811	34.680	3.17	27.752	

CAST CONRAD-82-024 DATE 06 OCT 82 TIME 1433 GMT  
LAT 5 00.4S LONG 092 29.9W



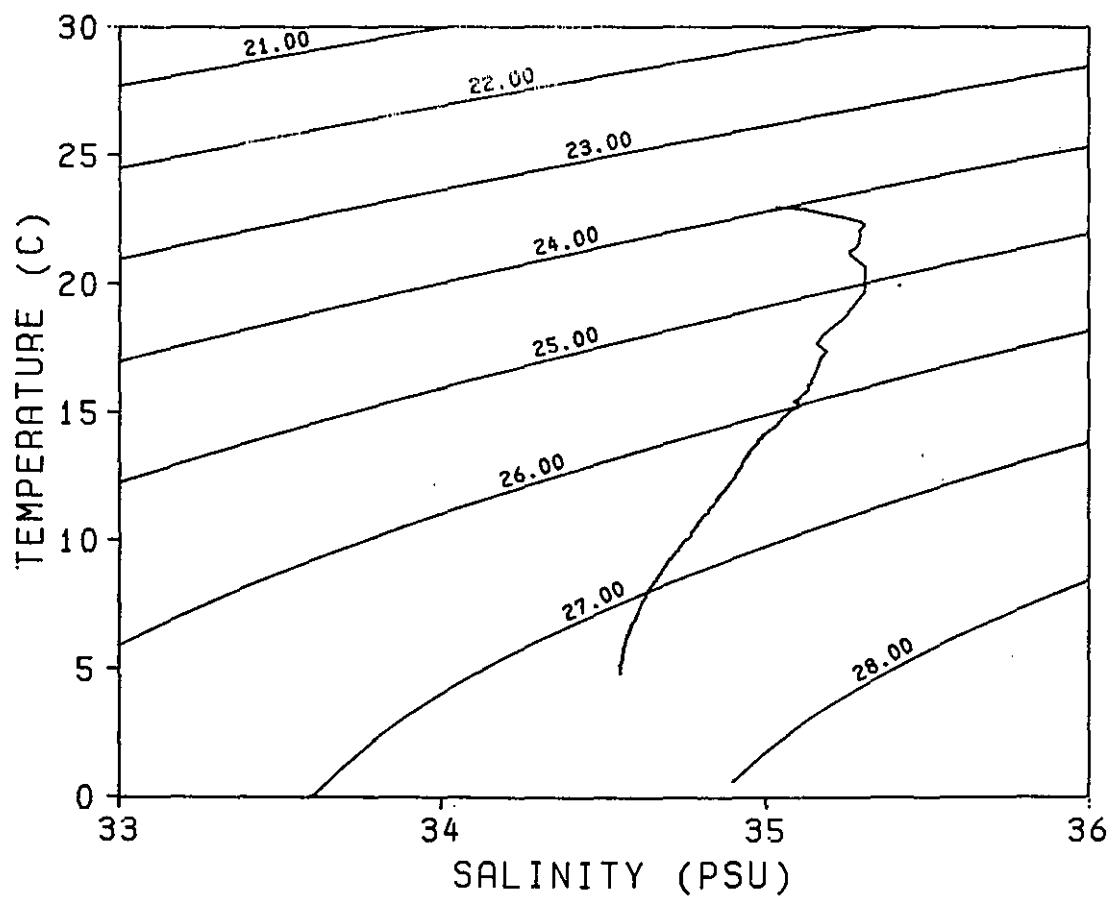
68



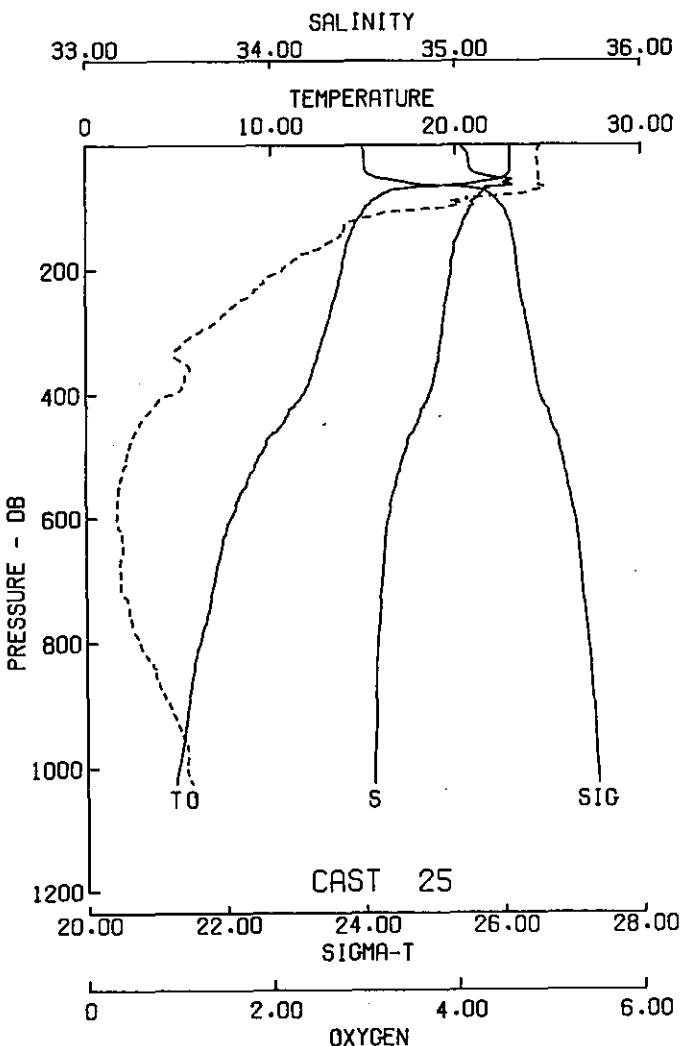
CAST CCNRAD-82-024 DATE 06 OCT 82 TIME 1433 GMT  
 LAT 5 00.4S LONG 092 29.9W WEATHER SEA STATE 5  
 BAROMETFR 13 WIND DIR 143 T SPD 10 KT VISIBILITY  
 CLOUD AMOUNT DRY WET DEPTH M.

PRES (DB)	TEMP (C)	SAL (PSU)	OXY (ML/L)	SIG-T	DELTA-D (DYN-M)
0.	23.632	35.019	4.90	23.783	0.000
10.	23.636	35.016	4.89	23.779	.041
20.	23.638	35.017	4.88	23.779	.083
30.	23.637	35.018	4.88	23.780	.124
40.	23.576	35.068	4.88	23.836	.165
50.	23.183	35.215	4.91	24.062	.205
60.	22.544	35.351	4.94	24.348	.244
70.	19.102	35.284	4.93	25.229	.275
80.	17.310	35.212	4.77	25.619	.302
90.	16.185	35.148	3.82	25.835	.325
100.	15.243	35.084	3.14	25.999	.346
110.	14.577	35.045	2.86	26.116	.366
120.	14.187	34.915	2.75	26.176	.386
130.	13.949	34.994	2.74	26.210	.404
140.	13.864	34.987	2.63	26.223	.422
150.	13.714	34.975	2.56	26.245	.440
160.	13.553	34.963	2.43	26.264	.458
170.	13.349	34.955	2.07	26.304	.476
180.	13.207	34.947	1.72	26.328	.494
190.	13.086	34.942	1.49	26.348	.511
200.	12.919	34.929	1.36	26.371	.529
250.	12.525	34.904	.93	26.430	.613
300.	12.257	34.887	.65	26.470	.697
350.	11.822	34.864	.63	26.536	.778
400.	11.178	34.823	.74	26.624	.856
450.	10.318	34.770	.66	26.735	.929
500.	9.382	34.593	.39	26.835	.997
550.	8.143	34.632	.27	26.984	1.060
600.	7.565	34.612	.32	27.053	1.117
650.	7.095	34.588	.40	27.102	1.172
700.	6.667	34.580	.48	27.154	1.224
750.	6.360	34.574	.46	27.191	1.274
800.	5.917	34.560	.68	27.237	1.323
850.	5.582	34.551	1.01	27.272	1.369
900.	5.310	34.553	1.11	27.306	1.414
950.	5.004	34.551	1.23	27.341	1.458
1000.	4.792	34.555	1.34	27.368	1.502
1012.	4.754	34.557	1.32	27.373	

CAST CONRAD-82-025 DATE 07 OCT 82 TIME 0741 GMT  
LAT 5 00.0S LONG 090 00.2W



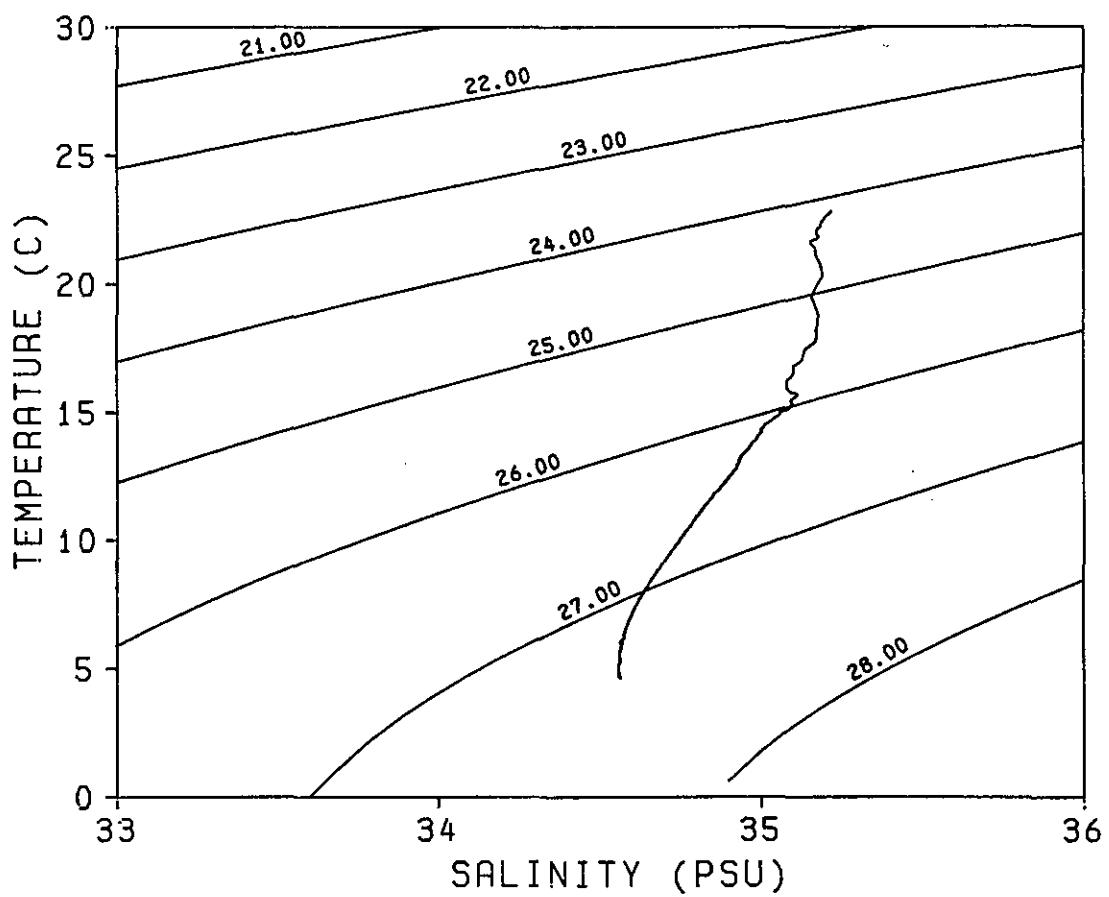
58

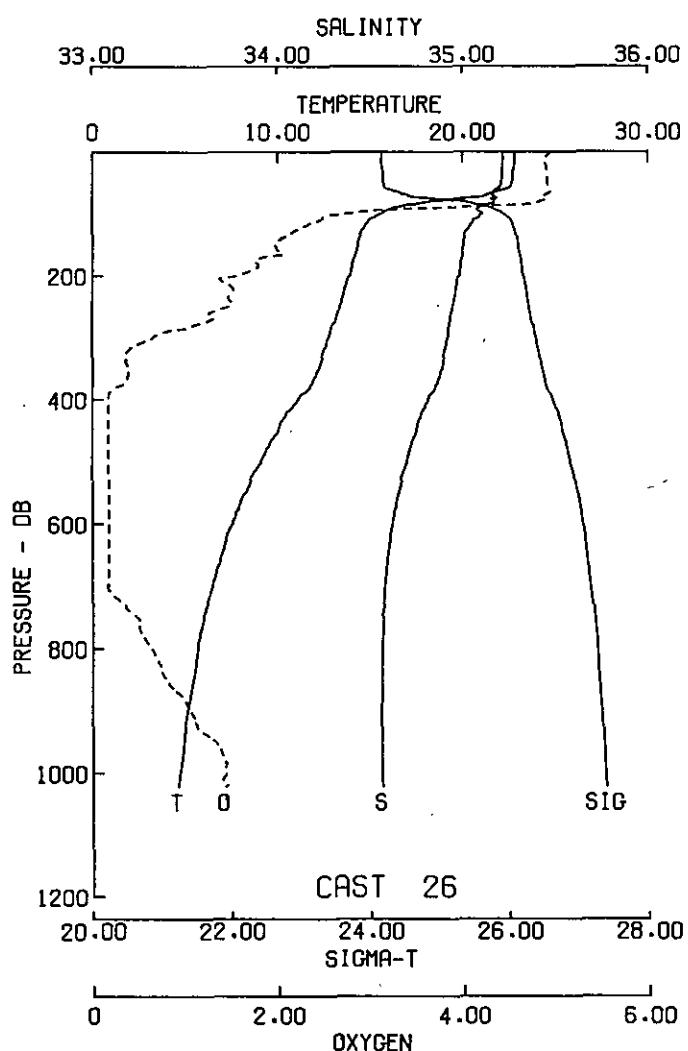


CAST CONRAD-82-025 DATE 07 OCT 82 TIME 0741 GMT  
 LAT 5 00.0S LONG 090 00.2W WEATHER SEA STATE 4  
 BAROMETER 1013 WIND DIR 160 T SPD 06 KT VISIBILITY 4  
 CLOUD AMOUNT DRY WET DEPTH M

PRES (DB)	TEMP (C)	SAL (PSU)	OXY (ML/L)	SIG-T	DELTA-D (DYN-M)
0.	22.948	35.033	4.92	23.992	0.000
10.	22.956	35.056	4.88	24.007	0.034
20.	22.955	35.069	4.83	24.017	0.078
30.	22.958	35.074	4.8	24.010	0.117
40.	22.955	35.084	4.80	24.028	0.157
50.	22.754	35.164	4.90	24.146	0.195
60.	21.353	35.275	4.94	24.624	0.231
70.	17.358	35.189	4.94	25.590	0.261
80.	16.041	35.132	4.63	25.856	0.284
90.	15.492	35.098	4.05	25.955	0.305
100.	15.114	35.079	3.94	26.052	0.326
110.	14.943	35.066	3.28	26.095	0.346
120.	14.675	35.046	2.96	26.123	0.365
130.	14.509	35.036	2.80	26.143	0.385
140.	14.362	35.020	2.81	26.157	0.404
150.	14.244	35.006	2.70	26.178	0.423
160.	14.078	34.988	2.60	26.192	0.442
170.	14.023	34.990	2.44	26.203	0.451
180.	13.946	34.983	2.35	26.210	0.469
190.	13.878	34.974	2.14	26.221	0.517
200.	13.837	34.978	2.14	26.289	0.609
2250.	13.402	34.949	1.66	26.377	0.598
3500.	12.876	34.924	1.22	26.456	0.783
3500.	12.371	34.897	1.07	26.542	0.865
4500.	11.752	34.855	.93	26.707	0.941
5000.	10.541	34.783	.57	26.858	1.009
5500.	9.327	34.711	.44	26.947	1.072
6000.	8.579	34.672	.35	27.031	1.131
6500.	7.772	34.529	.32	27.092	1.186
7200.	7.281	34.609	.30	27.137	1.239
7500.	6.821	34.597	.37	27.170	1.291
8000.	6.572	34.583	.46	27.321	1.340
8500.	6.107	34.570	.57	27.361	1.387
9000.	5.742	34.563	.74	27.394	1.433
9500.	5.452	34.560	.89	27.417	1.477
10000.	5.243	34.556	1.04	27.350	1.521
1026.	4.813	34.559	1.00	27.364	
	4.802	34.552	1.14		

CAST CONRAD-82-026 DATE 08 OCT 82 TIME 0030 GMT  
LAT 5 00.1S LONG 87 30.0W

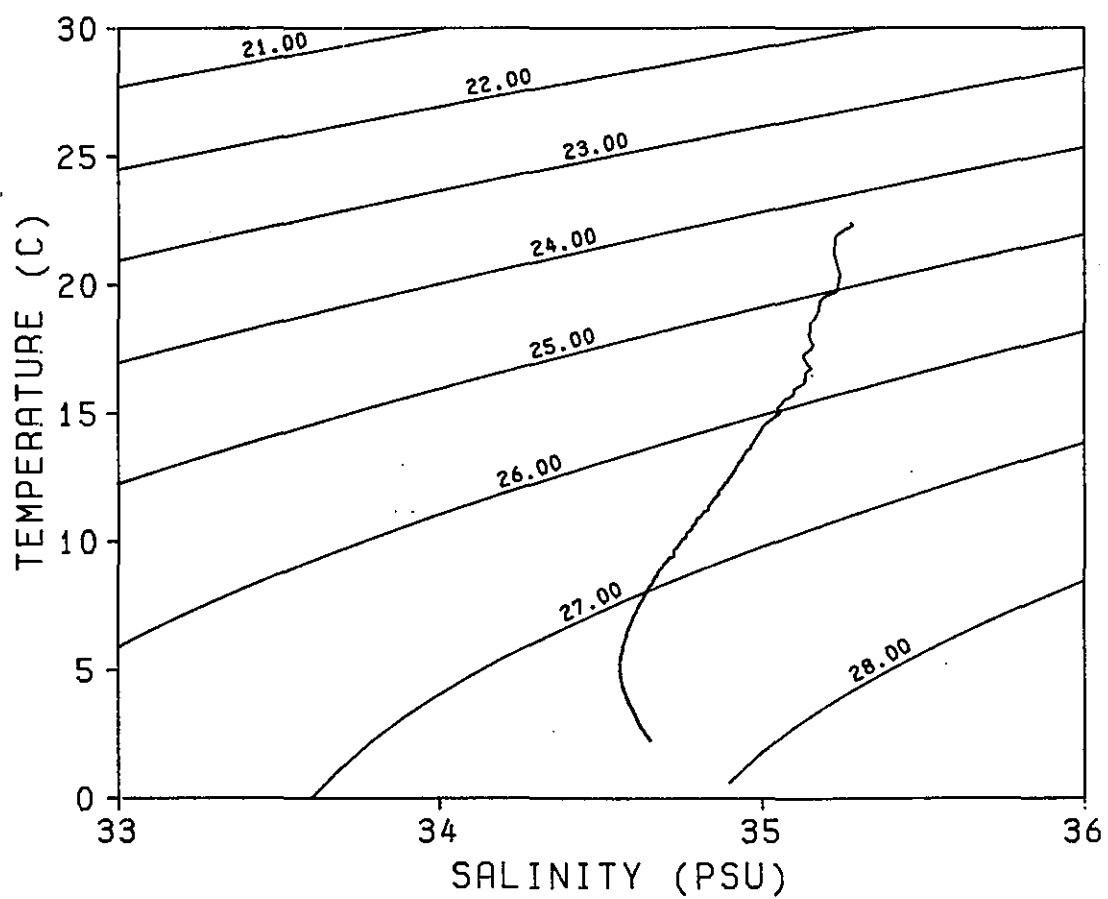


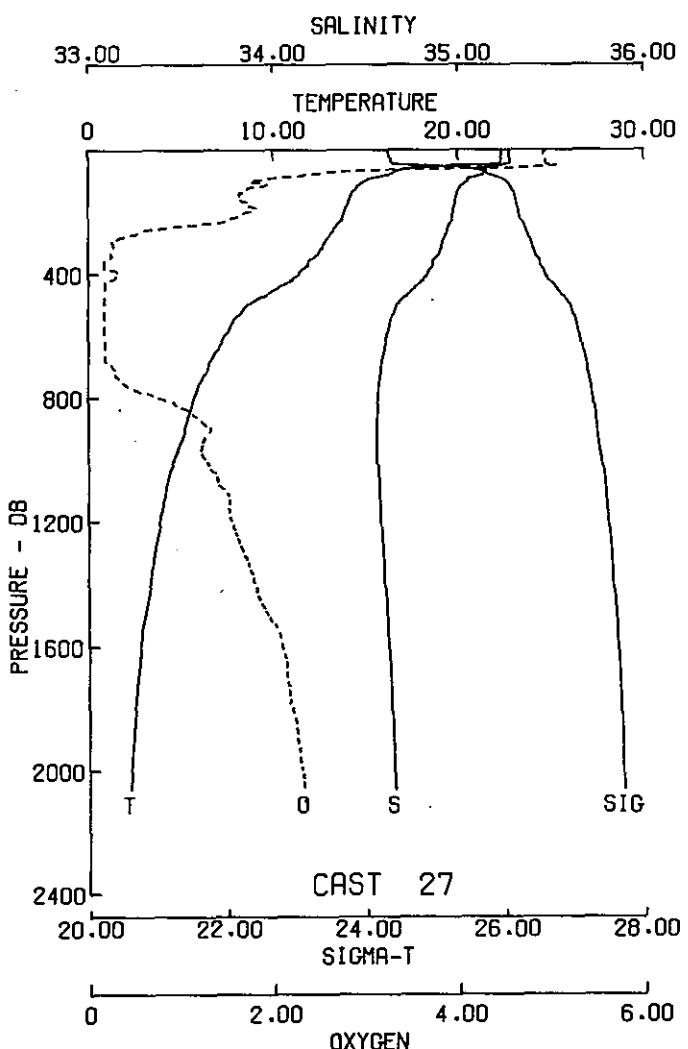


CAST CONRAD-82-026 DATE 08 OCT 82 TIME 0030 GMT  
 LAT 5° 00' S LONG 87° 30' W WEATHER SEA STATE  
 BAROMETER 1013 WIND DIR 145 T SPD 13 KT VISIBILITY  
 CLOUD AMOUNT DRY WET DEPTH M

PRES (DB)	TEMP (C)	SAL (PSU)	OXY (ML/L)	SIG-T	DELTA-D (DYN-M)
0.	22.821	35.219	4.94	24.169	0.000
10.	22.827	35.218	4.89	24.167	.038
20.	22.824	35.218	4.91	24.167	.075
30.	22.762	35.217	4.92	24.184	.113
40.	22.728	35.216	4.92	24.193	.150
50.	22.695	35.215	4.92	24.200	.188
60.	22.664	35.180	4.93	24.276	.225
70.	21.583	35.168	4.93	24.562	.261
80.	18.204	35.173	4.83	25.371	.291
90.	16.259	35.182	3.59	25.769	.315
100.	15.582	35.107	2.72	25.942	.337
110.	14.962	35.058	2.47	26.042	.358
120.	14.754	35.044	2.30	26.075	.377
130.	14.537	35.019	2.17	26.104	.397
140.	14.409	35.009	2.04	26.124	.417
150.	14.349	35.005	1.98	26.134	.436
160.	14.271	34.998	2.02	26.145	.455
170.	14.155	35.000	1.85	26.171	.474
180.	14.053	34.991	1.78	26.186	.493
190.	14.989	34.989	1.74	26.198	.512
200.	13.924	34.986	1.56	26.209	.531
250.	13.390	34.949	1.43	26.292	.623
300.	12.769	34.923	1.55	26.397	.711
350.	12.237	34.889	1.39	25.475	.795
400.	11.096	34.814	1.19	26.631	.875
450.	10.956	34.753	1.18	26.769	.947
500.	10.126	34.699	1.18	26.881	1.013
550.	8.278	34.653	1.24	26.979	1.074
600.	7.569	34.620	1.18	27.059	1.132
650.	6.994	34.597	1.18	27.122	1.185
700.	6.528	34.581	1.18	27.174	1.237
750.	6.001	34.567	1.18	27.231	1.285
800.	5.689	34.565	1.64	27.269	1.332
850.	5.458	34.563	1.82	27.296	1.377
900.	5.145	34.562	1.05	27.332	1.421
950.	4.920	34.559	1.33	27.356	1.463
1000.	4.717	34.563	1.44	27.383	1.504
1022.	4.633	34.566	1.44	27.394	

CAST CONRAD-82-027 DATE 08 OCT 82 TIME 1641 GMT  
LAT 5 00.0S LONG 085 00.0W

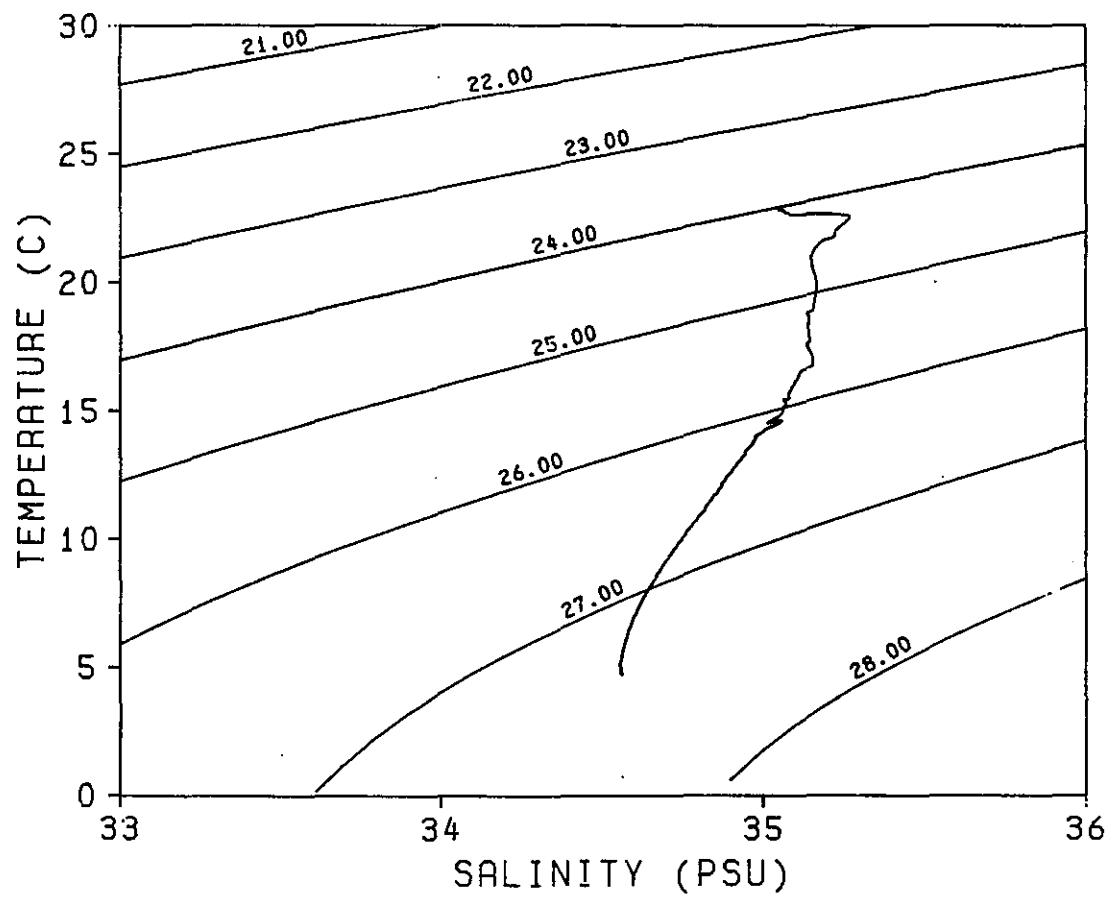


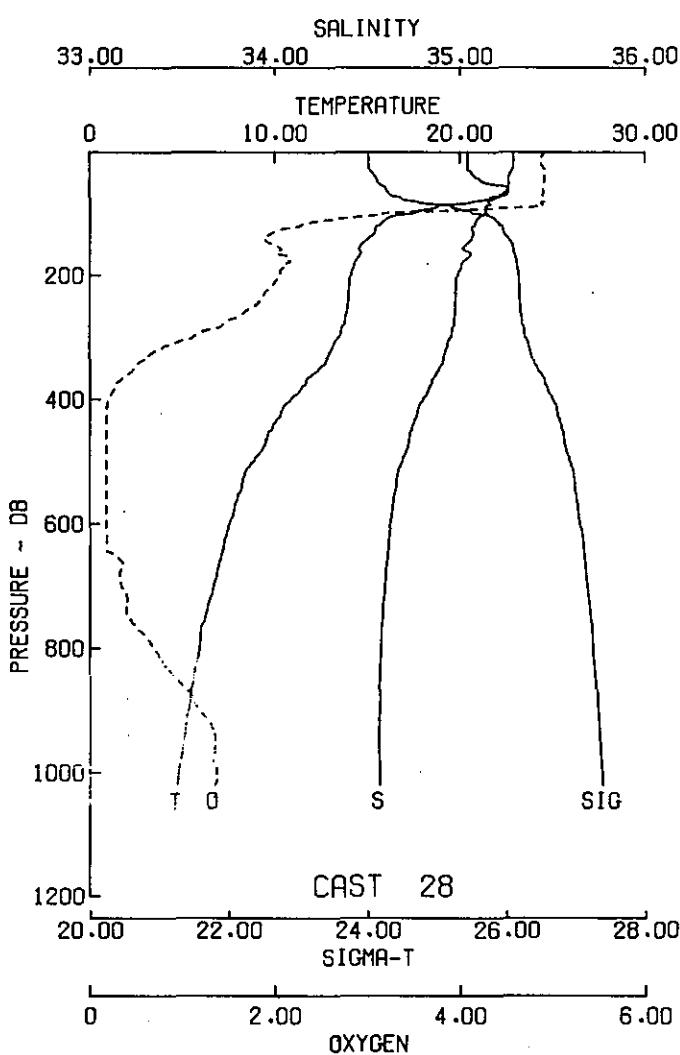


CAST CONRAD-82-027 DATE 08 OCT 82 TIME 1641 GMT  
 LAT 5°00.0S LONG 085°00.0W WEATHER SEA STATE 4  
 BAROMETER 101 WIND DIR 150° T SPD 08 KT VISIBILITY  
 CLOUD AMOUNT DRY WET DEPTH 4000 M

PRES (DB)	TEMPO (C)	SAL (PSU)	OXY (ML/L)	SIG-T	DELTA-D (DYN-M)
0.	22.391	35.277	4.95	24.335	0.000
10.	22.389	35.277	4.92	24.336	.036
20.	22.355	35.276	4.92	24.345	.072
30.	22.302	35.280	4.94	24.363	.108
40.	22.278	35.280	4.94	24.370	.144
50.	19.719	35.232	5.06	25.029	.178
60.	17.491	35.155	4.15	25.532	.206
70.	16.638	35.144	2.72	25.727	.229
80.	16.212	35.135	2.34	25.820	.252
90.	15.352	35.062	2.63	25.959	.274
100.	14.994	35.057	1.76	26.034	.294
110.	14.714	35.032	1.94	26.074	.314
120.	14.541	35.012	1.75	26.098	.334
130.	14.415	35.002	1.71	26.118	.353
140.	14.278	34.997	1.64	26.143	.372
150.	14.205	34.993	1.68	26.155	.392
160.	14.142	34.989	1.55	26.166	.411
170.	14.083	34.987	1.72	26.176	.430
180.	14.028	34.985	1.76	26.187	.440
190.	13.929	34.977	1.80	26.202	.467
200.	13.873	34.976	1.71	26.212	.486
210.	13.342	34.947	0.84	26.300	.578
2200.	12.779	34.917	0.27	26.390	.666
3500.	12.140	34.877	0.22	26.484	.751
4000.	11.417	34.838	0.33	26.591	.831
4500.	10.084	34.753	0.18	26.763	.904
5000.	8.572	34.669	0.18	26.946	.969
5500.	7.844	34.635	0.13	27.031	1.028
6000.	7.366	34.614	0.13	27.084	1.084
6500.	6.905	34.598	0.17	27.136	1.137
7000.	6.485	34.583	0.17	27.181	1.188
7500.	6.043	34.573	0.17	27.231	1.236
8000.	5.714	34.568	0.17	27.268	1.283
8500.	5.437	34.561	0.17	27.297	1.328
9000.	5.208	34.560	0.17	27.323	1.372
9500.	4.937	34.558	0.17	27.354	1.415
10000.	4.637	34.562	0.17	27.391	1.456
15000.	3.032	34.614	0.23	27.596	1.802
20000.	2.286	34.651	2.3	27.690	2.078
2059.	2.228	34.653	2.3	27.697	

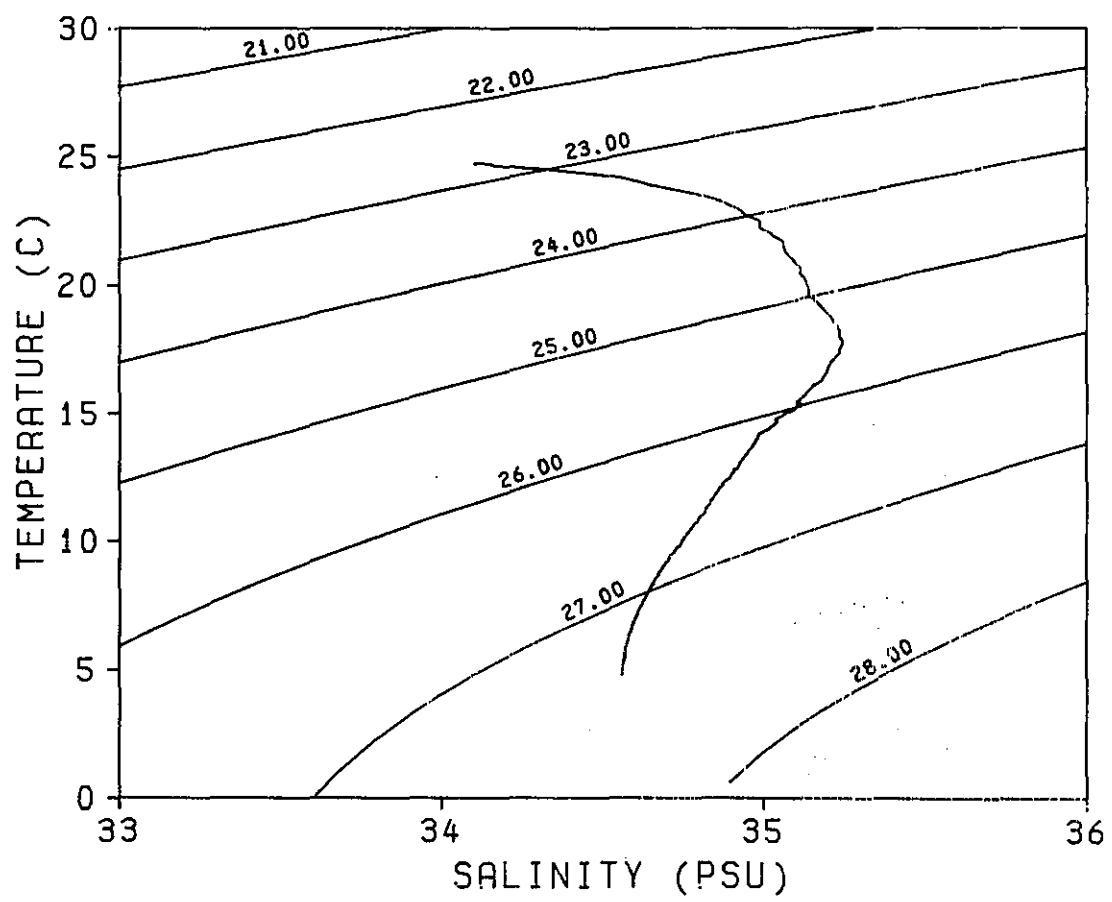
CAST CONRAD-82-028 DATE 09 OCT 82 TIME 0044 GMT  
LAT 4 01.6S LONG 084 59.3W

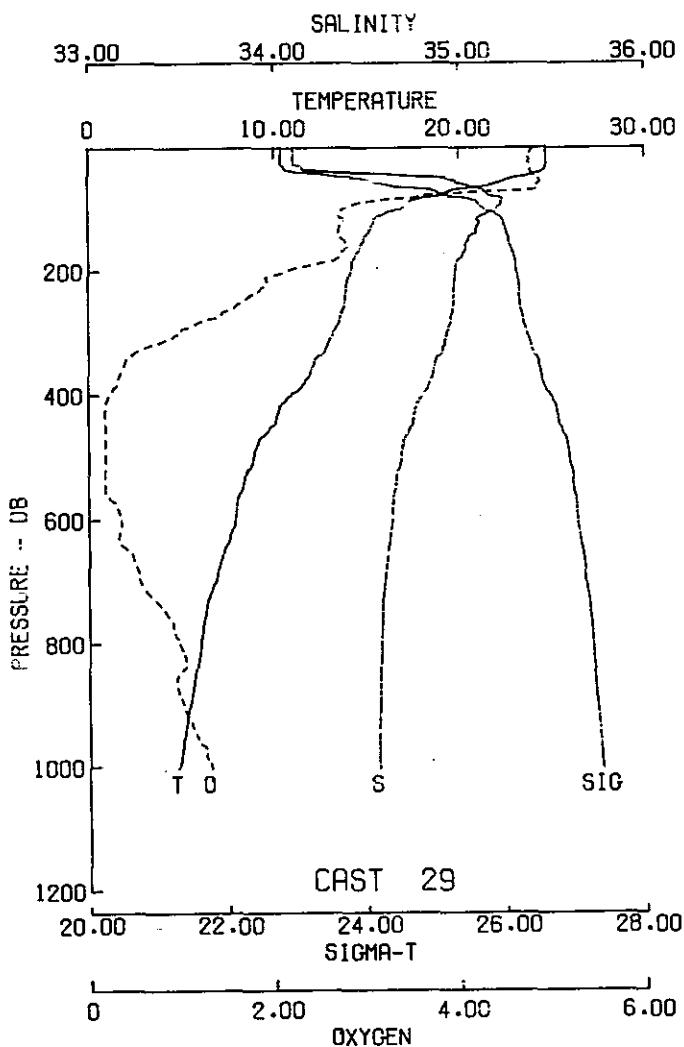




CLOUD	CONRAD-82-028	DATE 09 OCT 82	TIME 0044 GMT		
BAROMETER	4 C1.6S	LONG 084 59.3W	WEATHER	SEA STATE	
AMOUNT	12	WIND DIR 150 T	SPD DR KT	VISIBILITY	
		DRY	WET	DEPTH	
0.	22.893	35.046	4.90	24.017	0.000
10.	22.898	35.044	4.87	24.014	0.039
20.	22.894	35.043	4.88	24.015	0.078
30.	22.798	35.053	4.91	24.050	0.117
40.	22.673	35.086	4.91	24.118	0.156
50.	22.625	35.143	4.91	24.158	0.194
60.	22.578	35.266	4.90	24.274	0.231
70.	22.528	35.253	4.80	24.343	0.268
80.	20.673	35.152	4.91	24.715	0.392
90.	18.625	35.144	4.60	25.243	0.432
100.	17.145	35.152	3.17	25.613	0.458
110.	15.945	35.089	2.54	25.846	0.381
120.	15.473	35.082	2.27	25.947	0.402
130.	15.376	35.071	1.98	25.960	0.423
140.	15.029	35.063	1.88	26.031	0.444
150.	14.644	35.031	2.02	26.090	0.464
160.	14.519	35.030	2.04	26.106	0.484
170.	14.514	35.050	2.12	26.133	0.503
180.	14.296	34.712	2.12	26.151	0.523
190.	14.217	34.904	2.07	26.161	0.542
200.	14.103	34.989	2.05	26.174	0.561
250.	13.924	34.976	1.78	26.202	0.656
300.	13.474	34.952	1.12	26.277	0.749
350.	12.391	34.886	4.8	26.443	0.837
400.	10.859	34.799	2.1	26.563	0.916
450.	9.789	34.735	1.8	26.800	0.986
500.	8.825	34.687	1.8	26.921	1.051
550.	8.112	34.647	1.8	27.000	1.111
600.	7.565	34.624	1.8	27.063	1.163
650.	7.096	34.607	2.6	27.116	1.222
700.	6.682	34.592	3.4	27.162	1.273
750.	6.232	34.580	4.2	27.212	1.323
800.	5.936	34.572	6.0	27.244	1.371
850.	5.554	34.567	9.5	27.288	1.417
900.	5.311	34.562	1.18	27.313	1.461
950.	5.043	34.559	1.35	27.342	1.504
1000.	4.783	34.562	1.36	27.375	1.546
1020.	4.710	34.563	1.34	27.384	

CAST CONRAD-82-029 DATE 09 OCT 82 TIME 0817 GMT  
LAT 2 59.9S LONG 085 00.1W

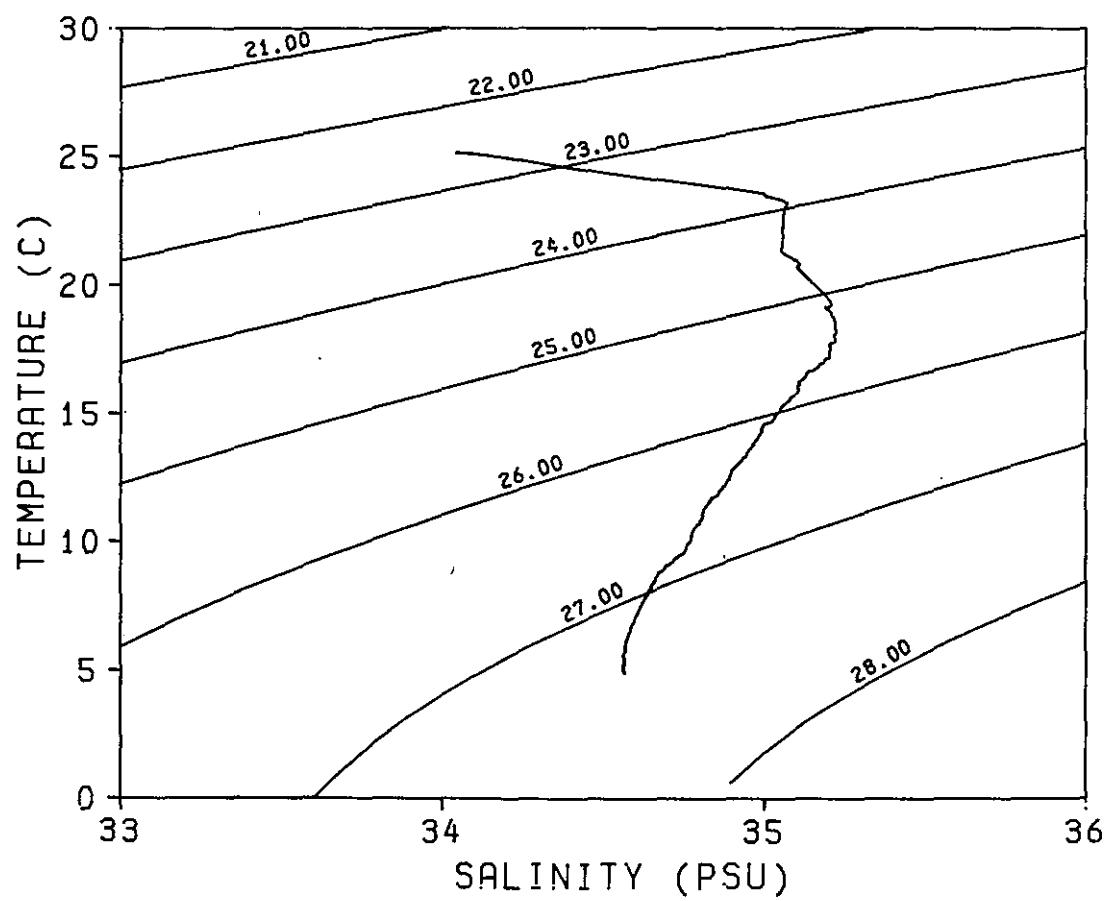




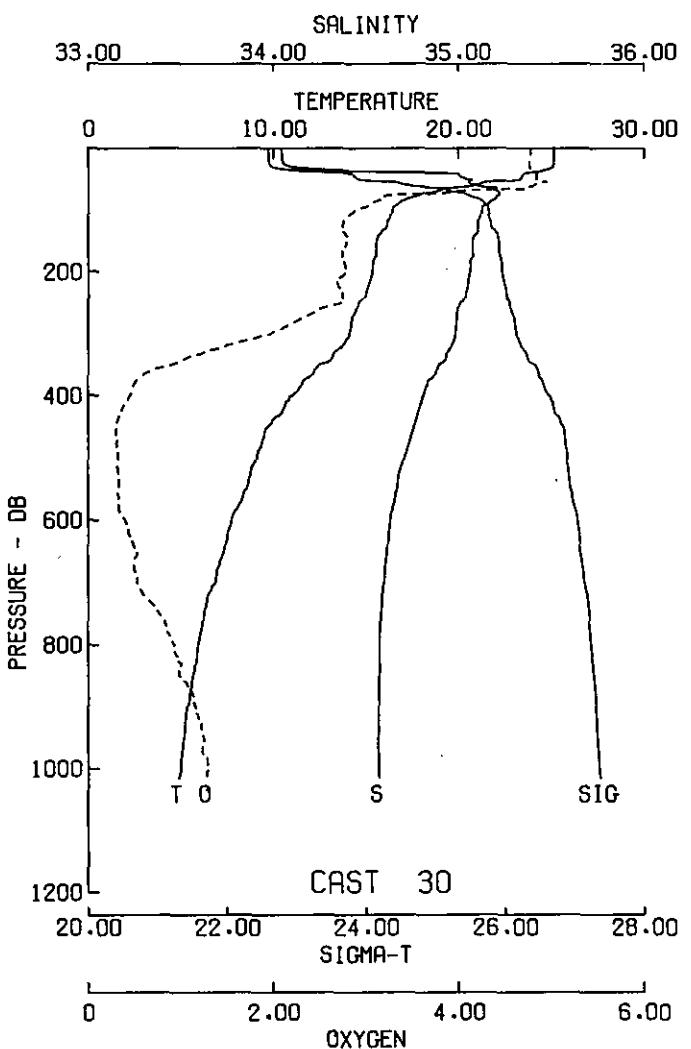
CAST CONRAD-R2-029 DATE 09 OCT 82 TIME 0817 GMT  
 LAT 2° 59' 9S LONG 085° 00.1W WEATHER SEA STATE 3  
 BAROMETER 1012 WIND DIR 145 T SPD 0.9 KT VISIBILITY 35M  
 CLOUD AMOUNT CRY WET DEPTH M

PRES (DB)	TEMP (C)	SAL (PSU)	OXY (ML/L)	SIG-T	DELTA-D (DYN-M)
0.	24.701	34.105	4.80	22.775	0.000
10.	24.717	34.107	4.76	22.772	.051
20.	24.723	34.106	4.76	22.770	.102
30.	24.718	34.137	4.76	22.794	.153
40.	24.507	34.292	4.77	22.975	.203
50.	22.993	34.913	4.87	23.888	.248
60.	21.973	35.020	4.86	24.263	.287
70.	19.665	35.132	4.80	24.972	.321
80.	18.877	35.197	3.58	25.220	.350
90.	17.387	35.234	2.97	25.617	.375
100.	16.947	35.206	2.76	25.702	.399
110.	15.903	35.139	2.71	25.894	.421
120.	15.437	35.169	2.76	25.976	.442
130.	15.284	35.160	2.71	26.003	.463
140.	15.134	35.093	2.69	26.031	.483
150.	14.876	35.051	2.75	26.057	.503
160.	14.697	35.039	2.80	26.085	.523
170.	14.533	35.036	2.73	26.113	.543
180.	14.366	35.013	2.66	26.136	.563
190.	14.207	34.988	2.44	26.152	.582
200.	14.182	34.986	2.15	26.155	.601
250.	13.852	34.974	1.67	26.215	.496
300.	13.212	34.936	1.00	26.318	.786
350.	12.153	34.871	.50	26.477	.876
400.	10.974	34.803	.23	26.645	.966
450.	9.929	34.746	.18	26.784	1.026
500.	8.886	34.685	.18	26.909	1.096
550.	8.315	34.656	.18	26.976	1.151
600.	7.883	34.637	.35	27.025	1.206
650.	7.525	34.612	.43	27.097	1.265
700.	6.849	34.598	.56	27.143	1.317
750.	6.290	34.581	.83	27.205	1.367
800.	5.983	34.574	.97	27.239	1.415
850.	5.717	34.571	.96	27.276	1.462
900.	5.406	34.568	1.02	27.306	1.509
950.	5.105	34.561	1.14	27.336	1.551
1000.	4.882	34.561	1.30	27.371	1.593
1003.	4.780	34.562	1.31	27.374	

CAST CONRAD-82-030 DATE 09 OCT 82 TIME 1517 GMT  
LAT 1 59.7S LONG 084 59.8W

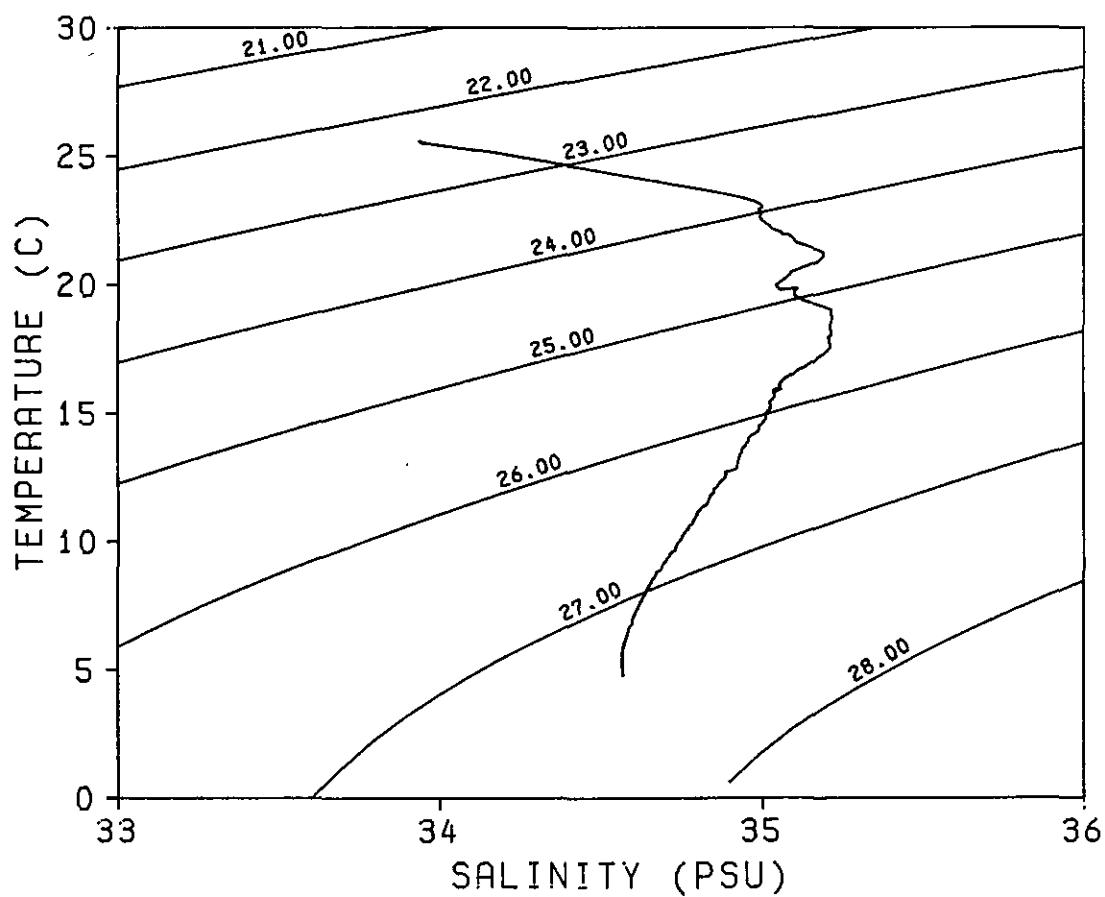


56

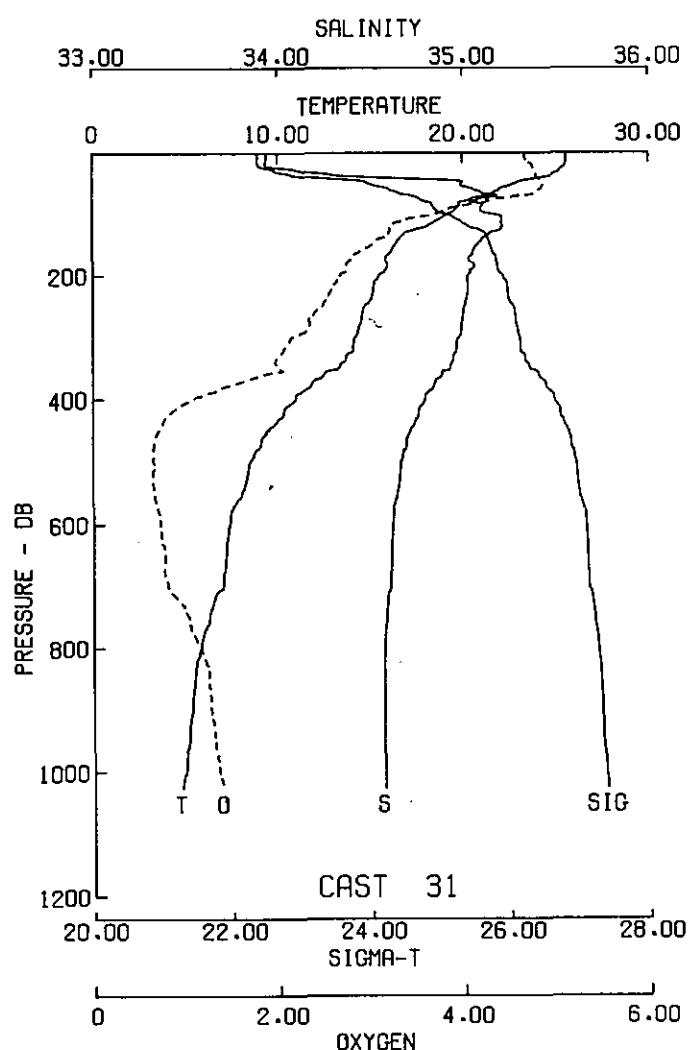


CAST CCNRAD-82-030		DATE 09 OCT 82		TIME 1517 GMT	
LAT	1 59.7S	LONG	084 59.8W	WEATHER	SEA STATE
BAROMETER	13	WIND DTR	135 T	SPD 12 KT	VISIBILITY
CLOUD	AMOUNT	DRY	WET	DEPTH	M
0.	25	14.2	34.049	4.79	22.599
10.	25	14.5	34.047	4.78	22.597
20.	25	14.4	34.050	4.76	22.600
30.	25	10.7	34.093	4.77	22.643
40.	23	8.90	34.868	4.83	23.619
50.	23	3.51	35.043	4.84	23.882
60.	20	9.15	35.103	4.82	24.613
70.	18	8.69	35.204	3.97	25.227
80.	17	5.01	35.205	3.20	25.568
90.	16	7.54	35.162	3.75	25.713
100.	16	42.5	35.125	2.92	25.763
110.	16	3.34	35.120	2.81	25.780
120.	16	1.80	35.105	2.76	25.804
130.	15	11.1	35.107	2.76	25.821
140.	15	7.35	35.095	2.79	25.898
150.	15	6.01	35.079	2.79	25.916
160.	15	5.77	35.077	2.78	25.920
170.	15	5.77	35.078	2.76	25.921
180.	15	4.34	35.069	2.76	25.946
190.	15	37.1	35.066	2.78	25.957
200.	15	3.43	35.062	2.78	25.960
250.	14	6.36	35.014	2.75	26.079
300.	14	11.9	34.984	1.97	26.166
350.	12	5.55	34.894	.94	26.417
400.	11	0.52	34.812	.46	26.638
450.	9	6.90	34.759	.31	26.835
500.	9	0.76	34.706	.32	26.895
550.	8	5.73	34.664	.33	26.946
600.	7	7.39	34.630	.40	27.042
650.	7	3.43	34.615	.52	27.088
700.	6	8.56	34.599	.53	27.143
750.	6	25.3	34.581	.76	27.210
800.	5	9.56	34.575	.95	27.243
850.	5	6.54	34.571	.99	27.278
900.	5	3.63	34.570	1.16	27.313
950.	5	20.4	34.568	1.25	27.330
1000.	4	0.12	34.568	1.28	27.353
1016.	4	8.80	34.570	1.29	27.370

CAST CONRAD-82-031 DATE 09 OCT 82 TIME 2209 GMT  
LAT 100.6S LONG 084 59.5W

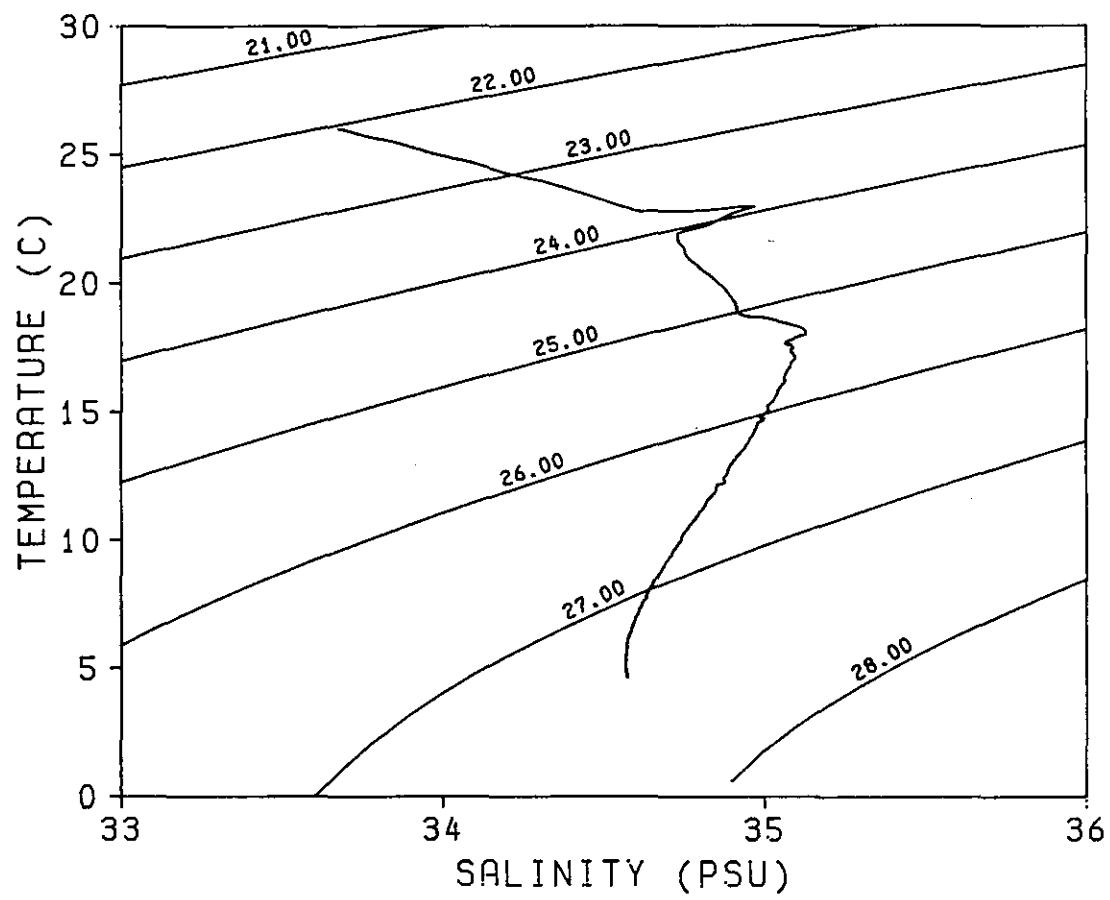


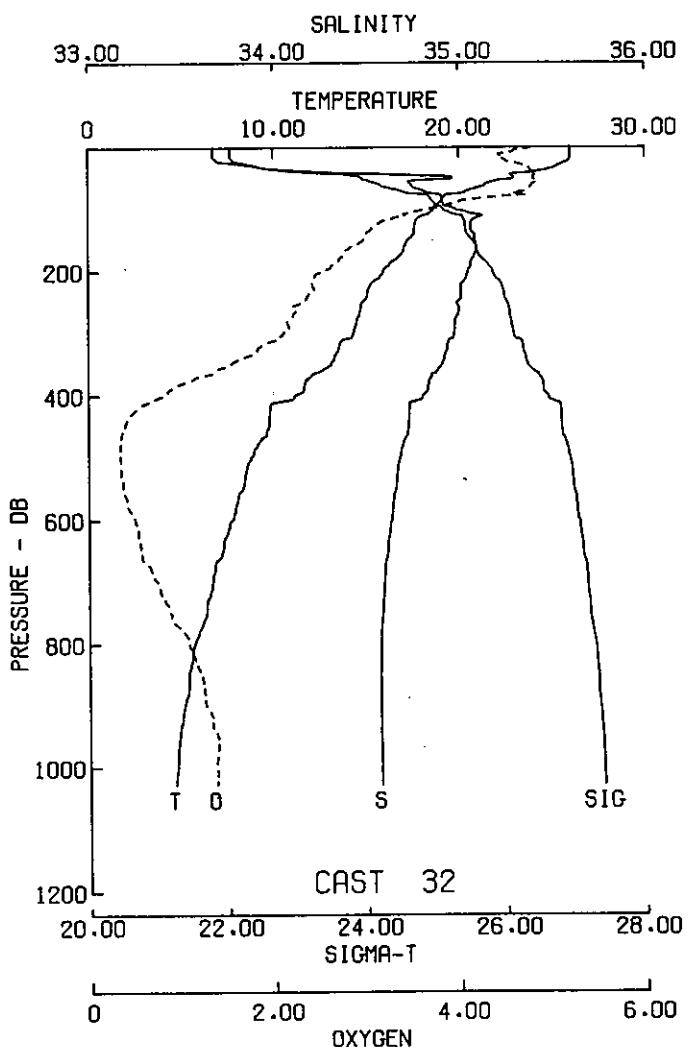
16



CAST CONRAD-82-031		DATE 09 OCT 82		TIME 2209 GMT	
LAT	LONG	WEATHER	SEA STATE	VISIBILITY	DEPTH
1° 00'.6S	084° 59'.5W	10	150	T	09 KT
CLOUD	AMOUNT	DRY	WET		
0.	25.583	33.944	4.67	22.386	0.000
10.	25.583	33.941	4.68	22.383	0.055
20.	25.520	33.939	4.76	22.401	0.109
30.	25.494	34.032	4.78	22.546	0.163
40.	24.423	34.486	4.80	23.146	0.214
50.	22.892	34.989	4.86	23.975	0.255
60.	21.963	35.059	4.84	24.290	0.294
70.	21.233	35.192	4.65	24.593	0.320
80.	19.950	35.043	4.31	24.825	0.362
90.	19.719	35.098	3.88	24.927	0.393
100.	19.231	35.167	3.69	25.106	0.423
110.	18.631	35.214	3.38	25.295	0.451
120.	18.119	35.214	3.22	25.423	0.477
130.	16.927	35.151	3.27	25.664	0.502
140.	16.608	35.108	3.10	25.707	0.526
150.	16.388	35.081	3.02	25.737	0.549
160.	16.167	35.060	2.90	25.772	0.572
170.	15.894	35.039	2.81	25.818	0.595
180.	15.913	35.056	2.75	25.827	0.617
190.	15.851	35.049	2.74	25.836	0.639
200.	15.442	35.026	2.67	25.911	0.661
250.	14.691	35.008	2.48	26.063	0.766
300.	14.192	34.980	2.16	26.148	0.866
350.	13.318	34.932	2.00	26.293	0.962
400.	10.958	34.796	1.06	26.643	1.043
450.	9.457	34.716	.71	26.841	1.113
500.	8.475	34.663	.66	26.956	1.176
550.	8.058	34.644	.67	27.006	1.235
600.	7.351	34.616	.72	27.088	1.291
650.	7.163	34.610	.78	27.109	1.344
700.	7.000	34.603	.80	27.127	1.397
750.	6.258	34.582	1.04	27.210	1.447
800.	5.791	34.572	1.17	27.262	1.495
850.	5.478	34.560	1.24	27.290	1.540
900.	5.328	34.569	1.27	27.316	1.584
950.	5.166	34.569	1.32	27.335	1.627
1000.	4.938	34.571	1.35	27.363	1.669
1026.	4.751	34.570	1.41	27.384	

CAST CONRAD-82-032 DATE 10 OCT 82 TIME 0442 GMT  
LAT 00 00.1N LONG 084 59.6W

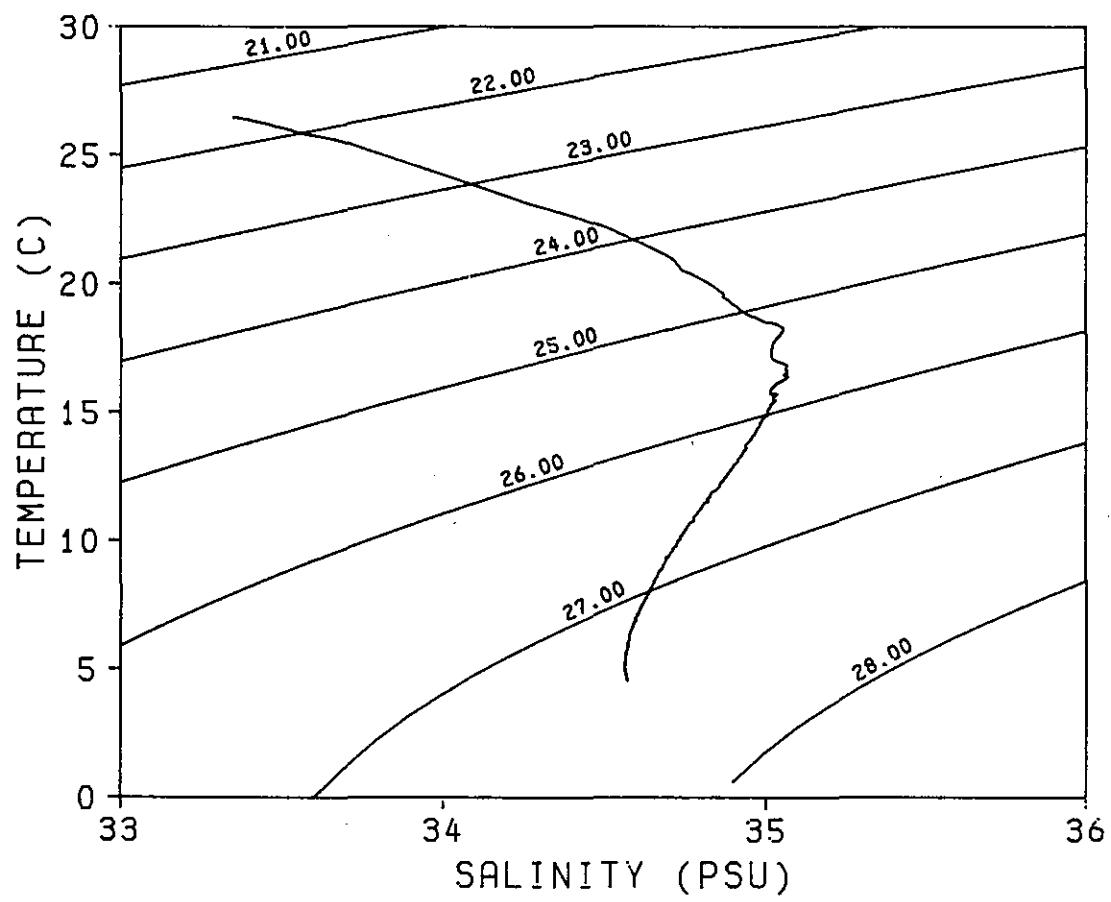


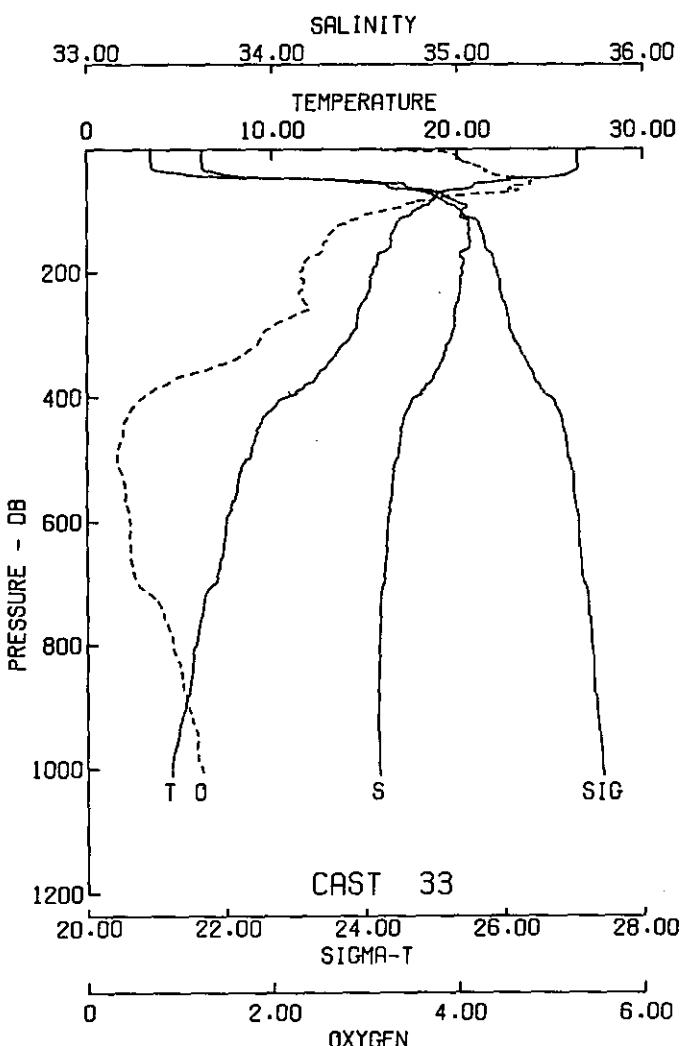


CAST CONRAD-82-032 DATE 10 OCT 82 TIME 0442 GMT  
 LAT 00 00 N LONG 084 59.6 W WEATHER SEA STATE  
 BAROMETER 12 WIND DIP 135 T SPD 10 KT VISIBILITY  
 CLOUD AMOUNT DRY WET DEPTH M

PRES (DB)	TEMP (C)	SAL (PSU)	OXY (ML/L)	SIG-T	DELTA-D (10 <sup>-3</sup> M)
0.	25.993	33.679	4.77	22.060	0.000
10.	26.014	33.674	4.49	22.050	0.058
20.	26.047	33.694	4.48	22.085	0.116
30.	25.300	33.897	4.74	22.437	0.172
40.	24.082	34.262	4.79	23.078	0.224
50.	22.929	34.966	4.80	23.946	0.266
60.	21.403	34.746	4.79	24.209	0.305
70.	20.488	34.809	4.75	24.504	0.341
80.	19.200	34.911	4.48	24.919	0.374
90.	18.955	34.912	3.96	24.983	0.404
100.	18.657	34.984	3.65	25.113	0.434
110.	18.125	34.129	3.42	25.756	0.462
120.	17.668	34.066	3.17	25.421	0.488
130.	17.622	34.064	3.07	25.430	0.514
140.	17.583	34.085	3.01	25.455	0.540
150.	17.242	34.090	2.97	25.542	0.565
160.	17.080	34.096	2.85	25.585	0.590
170.	16.967	34.090	2.77	25.608	0.615
180.	16.644	34.072	2.71	25.671	0.639
190.	16.244	34.062	2.64	25.756	0.662
200.	15.922	34.048	2.53	25.819	0.685
210.	14.803	34.089	2.32	26.024	0.792
220.	14.307	34.073	2.11	26.119	0.897
230.	13.103	34.090	1.53	26.319	0.987
240.	11.163	34.086	0.81	26.613	1.040
250.	9.744	34.727	0.40	26.801	1.138
260.	8.751	34.677	0.34	26.924	1.203
270.	8.304	34.656	0.37	26.977	1.264
280.	7.771	34.632	0.50	27.039	1.321
290.	7.230	34.612	0.57	27.101	1.376
300.	6.660	34.592	0.74	27.164	1.428
310.	6.324	34.582	0.88	27.202	1.477
320.	5.674	34.573	1.08	27.277	1.525
330.	5.334	34.569	1.20	27.316	1.564
340.	5.104	34.569	1.26	27.343	1.612
350.	4.825	34.571	1.38	27.377	1.654
360.	4.708	34.573	1.37	27.402	1.694
370.	4.619	34.574	1.37	27.403	

CAST CONRAD-82-033 DATE 10 OCT 82 TIME 1445 GMT  
LAT 00 59.9N LONG 084 17.4W

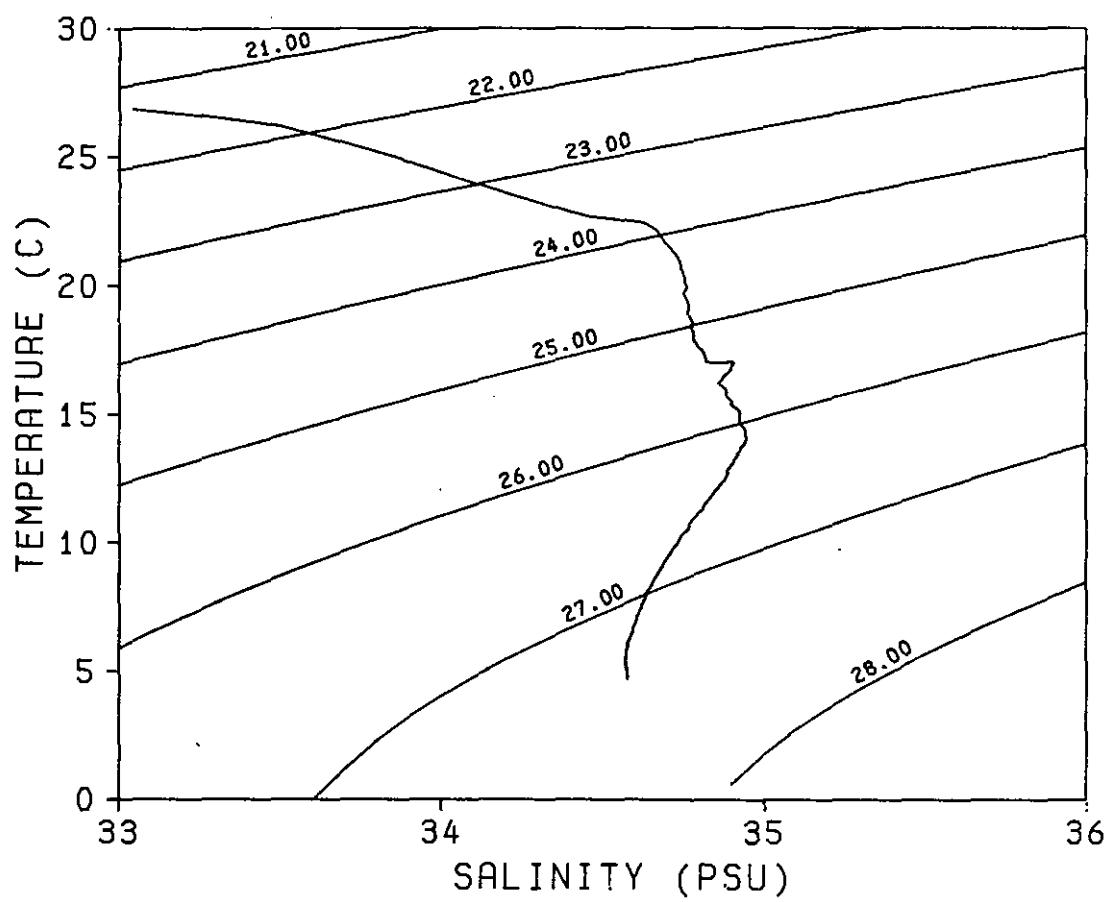


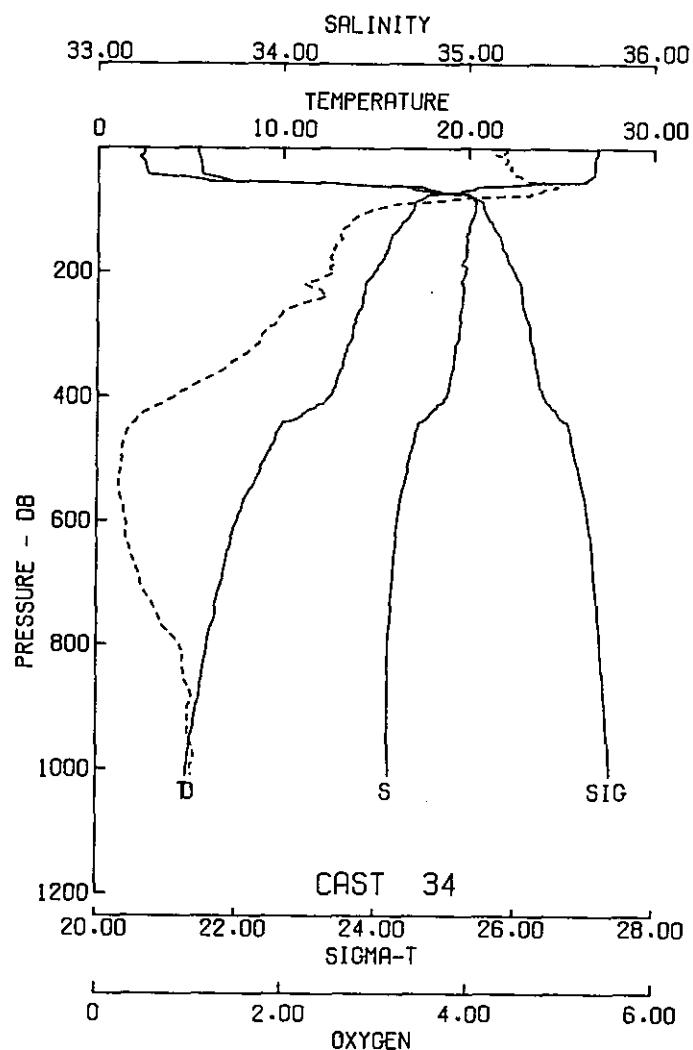


CAST CONRAD-82-033 DATE 10 OCT 82 TIME 1445 GMT  
 LAT 10 59.9N LONG 084 17.4W WEATHER SEA STATE  
 BAROMETER 12 WIND DIR 118 T SPD 07 KT VISIBILITY  
 CLOUD AMOUNT DRY WET DEPTH M

PRES (DB)	TEMP (C)	SAL (PSU)	OXY (ML/L)	SIG-T	DELTA-D (DYN-M)
0.	26.459	33.349	3.18	21.666	0.000
10.	26.474	33.348	3.08	21.661	.062
20.	26.475	33.347	4.05	21.660	.123
30.	26.469	33.351	4.25	21.665	.185
40.	25.001	33.517	4.34	21.935	.246
50.	22.804	34.352	4.81	23.517	.299
60.	20.864	34.721	4.64	24.337	.339
70.	19.249	34.894	4.51	24.893	.372
80.	18.746	34.956	3.75	25.069	.402
90.	18.446	35.033	3.42	25.203	.431
100.	17.705	35.023	3.21	25.379	.458
110.	17.326	35.015	2.96	25.465	.484
120.	16.707	35.060	2.81	25.647	.509
130.	16.620	35.768	2.67	25.672	.532
140.	16.431	35.056	2.62	25.716	.556
150.	16.397	35.067	2.62	25.724	.579
160.	16.347	35.065	2.54	25.734	.602
170.	15.740	35.014	2.51	25.835	.625
180.	15.714	35.037	2.37	25.858	.647
190.	15.649	35.031	2.33	25.868	.669
200.	15.464	35.032	2.30	25.911	.691
250.	14.830	34.998	2.35	26.025	.798
300.	14.266	34.971	1.91	26.125	.899
350.	12.936	34.902	1.40	26.348	.993
400.	12.743	34.780	620	26.669	1.076
450.	12.255	34.697	30	26.859	1.144
500.	12.547	34.668	33	26.949	1.207
550.	12.094	34.644	42	27.000	1.266
600.	7.516	34.620	46	27.067	1.323
650.	7.321	34.614	47	27.096	1.378
700.	6.868	34.600	55	27.143	1.431
750.	6.244	34.581	83	27.211	1.480
800.	5.882	34.577	92	27.255	1.528
850.	5.649	34.571	1.02	27.279	1.573
900.	5.301	34.569	1.15	27.319	1.618
950.	4.889	34.570	1.19	27.369	1.660
1000.	4.573	34.575	1.23	27.408	1.700
1012.	4.542	34.576	1.24	27.413	

CAST CONRAD-82-034 DATE 10 OCT 82 TIME 2111 GMT  
LAT 02 00.0N LONG 083 36.9W

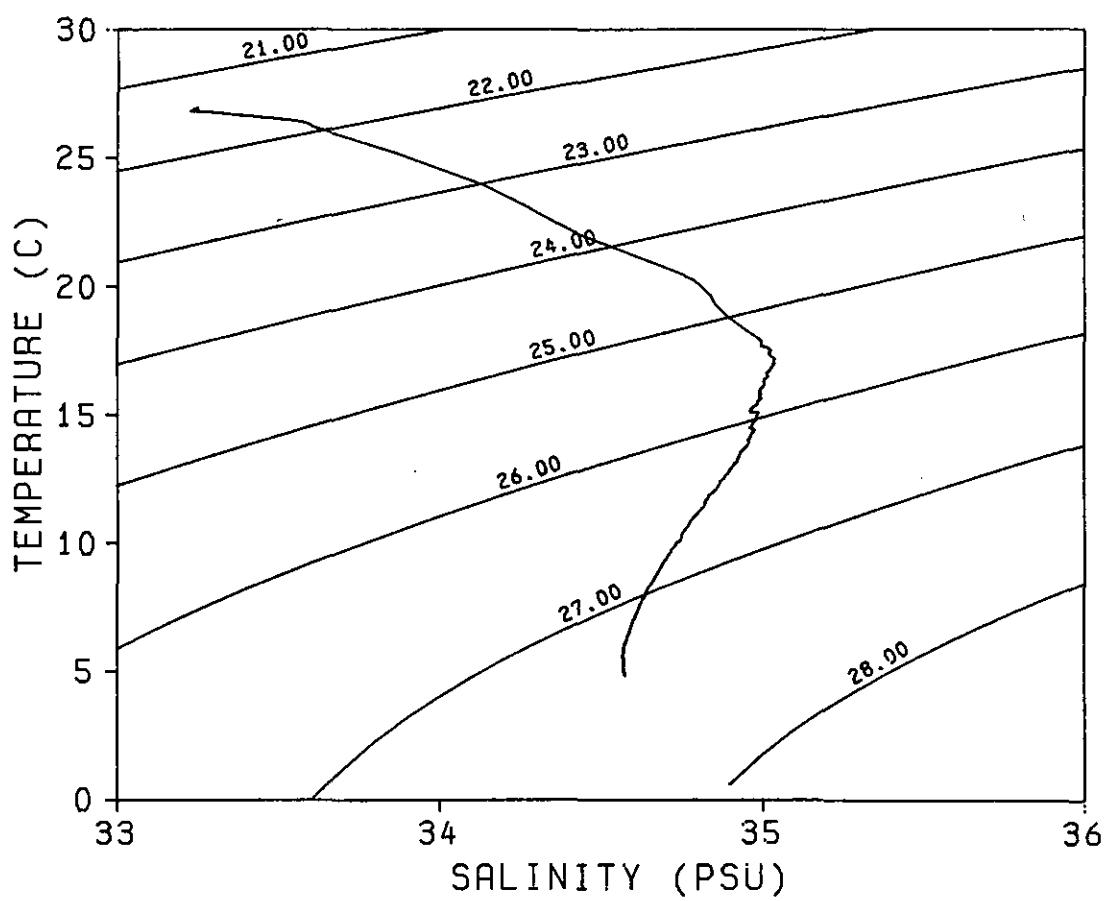


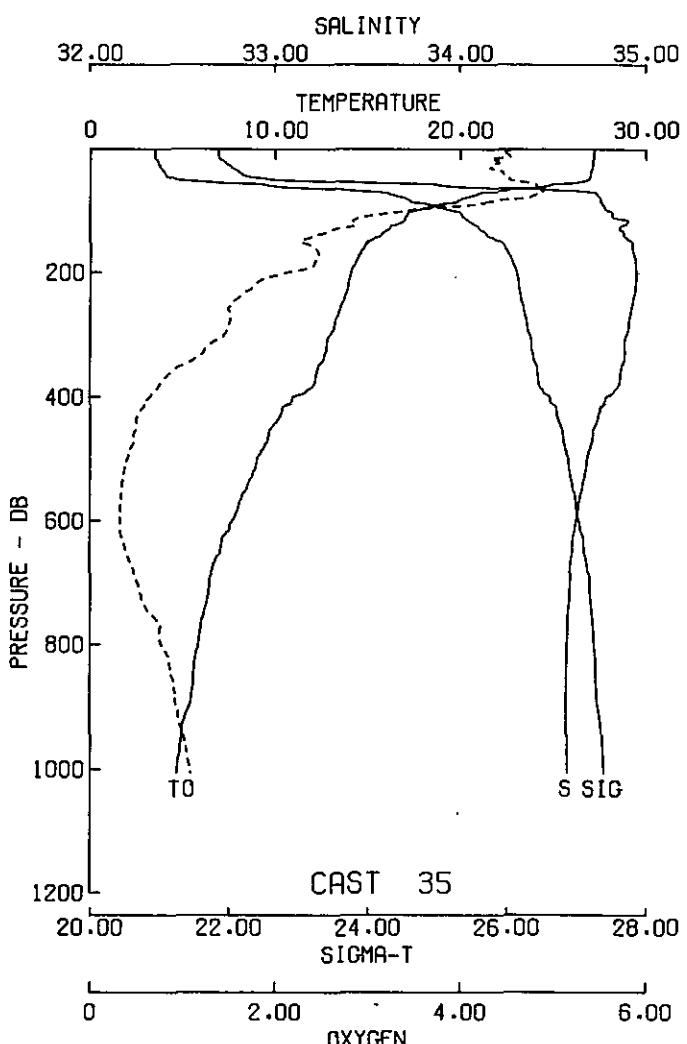


CAST CONRAD-82-034 DATE 10 OCT 82 TIME 2111 GMT  
 LAT 02° 00' ON LONG 083° 36.9' W WEATHER SEA STATE 3  
 BAROMETER 1010 WIND DIR 175 T SPD 04 KT VISIBILITY  
 CLOUD AMOUNT DRY WET DEPTH M

PRFS (DB)	TEMP (C)	SAL (PSU)	OXY (ML/L)	SIG-T	DELTA-D (DYN-M1)
0.	26.936	34.251	4.40	21.442	0.000
10.	26.917	34.246	4.25	21.444	0.064
20.	26.902	34.248	4.41	21.482	0.127
30.	26.795	34.260	4.46	21.493	0.190
40.	26.777	34.265	4.50	21.506	0.254
50.	26.424	34.431	4.63	21.828	0.316
60.	22.030	34.788	4.92	23.796	0.368
70.	19.625	34.819	4.78	24.756	0.403
80.	17.597	34.819	4.02	25.402	0.432
90.	17.073	34.819	2.25	25.541	0.457
100.	17.909	34.819	2.95	25.558	0.482
110.	16.798	34.819	3.80	25.600	0.506
120.	16.432	34.819	7.22	25.676	0.536
130.	16.245	34.819	6.52	25.710	0.554
140.	15.908	34.819	5.56	25.780	0.577
150.	15.787	34.997	5.23	25.811	0.599
160.	15.711	34.990	5.58	25.823	0.622
170.	15.509	34.985	5.52	25.864	0.644
180.	15.366	34.980	5.54	25.892	0.666
190.	15.100	34.973	5.56	25.946	0.687
200.	14.913	34.981	5.66	25.994	0.708
210.	14.323	34.950	2.3	26.115	0.806
220.	13.765	34.923	1.41	26.300	0.906
230.	13.251	34.881	3.5	26.408	0.987
240.	12.549	34.728	2.8	26.780	1.087
250.	12.087	34.647	2.3	26.877	1.165
260.	11.093	34.623	3.2	26.982	1.231
270.	10.224	34.605	3.6	27.060	1.293
280.	7.578	34.585	4.7	27.125	1.404
290.	7.037	34.585	6.6	27.155	1.456
300.	6.748	34.595	8.0	27.195	1.506
310.	6.394	34.574	9.5	27.230	1.554
320.	6.986	34.572	9.9	27.271	1.601
330.	7.720	34.571	9.9	27.311	1.646
340.	3.87	34.571	1.01	27.345	1.689
350.	5.099	34.571	1.02	27.378	1.731
360.	4.855	34.577	1.03	27.381	
370.	4.831	34.578			

CAST CONRAD-82-035 DATE 11 OCT 82 TIME 0600 GMT  
LAT 02 59.8N LONG 082 55.5W

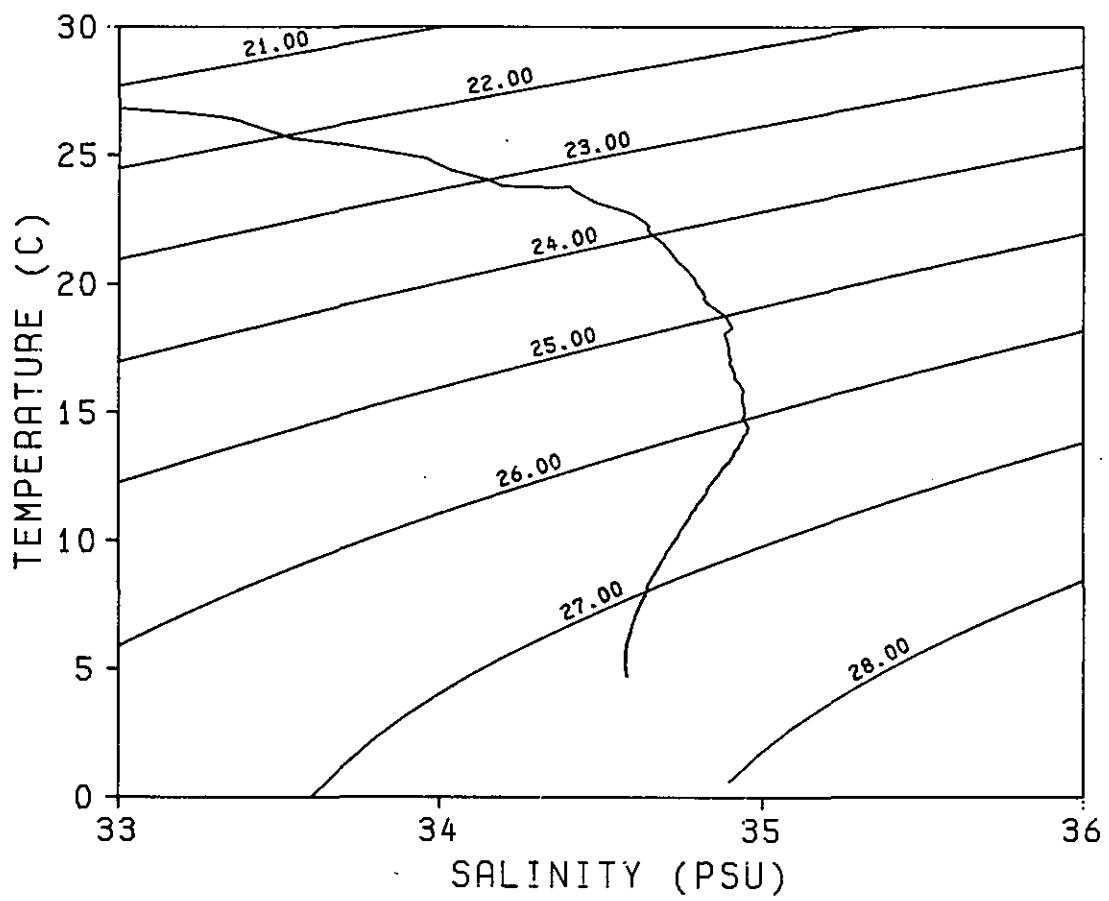




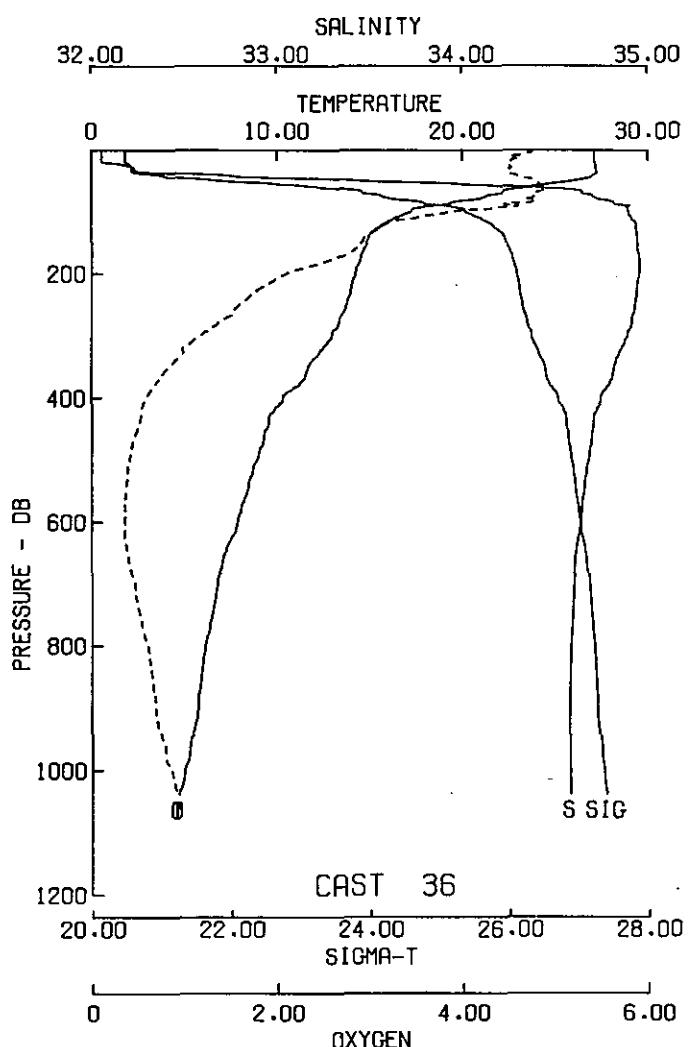
CAST CONRAD-82-035 DATE 11 OCT 82 TIME 0600 GMT  
 LAT 02 59.8N LONG 082 55.5W WEATHER SEA STATE  
 BAROMETER 10 WIND DIR 190 T SPD 10 KT VISIBILITY  
 CLOUD AMOUNT DRY WET DEPTH M

PRES (DB)	TEMP (C)	SAL (PSU)	OXY (ML/L)	SIG-T	DELTA-D (DYN-M)
0.	27.200	32.695	4.54	20.941	0.000
10.	27.212	32.694	4.53	20.936	.068
20.	27.139	32.725	4.38	20.982	.137
30.	27.126	32.766	4.33	21.017	.205
40.	27.025	32.819	4.46	21.090	.272
50.	26.912	32.982	4.54	21.248	.339
60.	24.701	33.922	4.83	22.637	.398
70.	21.553	34.703	4.90	24.135	.443
80.	20.151	34.754	4.59	24.552	.479
90.	18.963	34.764	4.18	24.868	.512
100.	17.625	34.795	3.42	25.224	.542
110.	17.069	34.821	2.97	25.377	.564
120.	16.811	34.900	2.87	25.499	.595
130.	16.199	34.861	2.67	25.612	.619
140.	15.766	34.881	2.45	25.727	.643
150.	15.086	34.925	2.28	25.912	.665
160.	14.777	34.924	2.43	25.970	.686
170.	14.579	34.931	2.46	26.027	.707
180.	14.392	34.943	2.45	26.077	.727
190.	14.232	34.943	2.41	26.111	.747
200.	14.089	34.947	2.13	26.144	.766
210.	13.592	34.927	1.53	26.233	.861
220.	12.978	34.895	1.45	26.334	.953
230.	12.349	34.870	.98	26.438	1.040
240.	11.978	34.789	.66	26.634	1.122
250.	11.788	34.719	.51	26.787	1.194
260.	11.024	34.683	.45	26.885	1.260
270.	8.428	34.655	.35	26.957	1.322
280.	7.710	34.624	.33	27.041	1.381
290.	7.066	34.605	.39	27.110	1.435
300.	6.449	34.590	.52	27.191	1.484
310.	6.155	34.580	.65	27.222	1.534
320.	5.857	34.575	.78	27.256	1.581
330.	5.600	34.572	.89	27.286	1.627
340.	5.371	34.572	.94	27.314	1.672
350.	4.912	34.574	1.02	27.369	1.714
360.	4.717	34.575	1.09	27.393	1.755
370.	4.685	34.576	1.09	27.397	

CAST CONRAD-82-036 DATE 11 OCT 82 TIME 1340 GMT  
LAT 03 59.3N LONG 082 13.1W

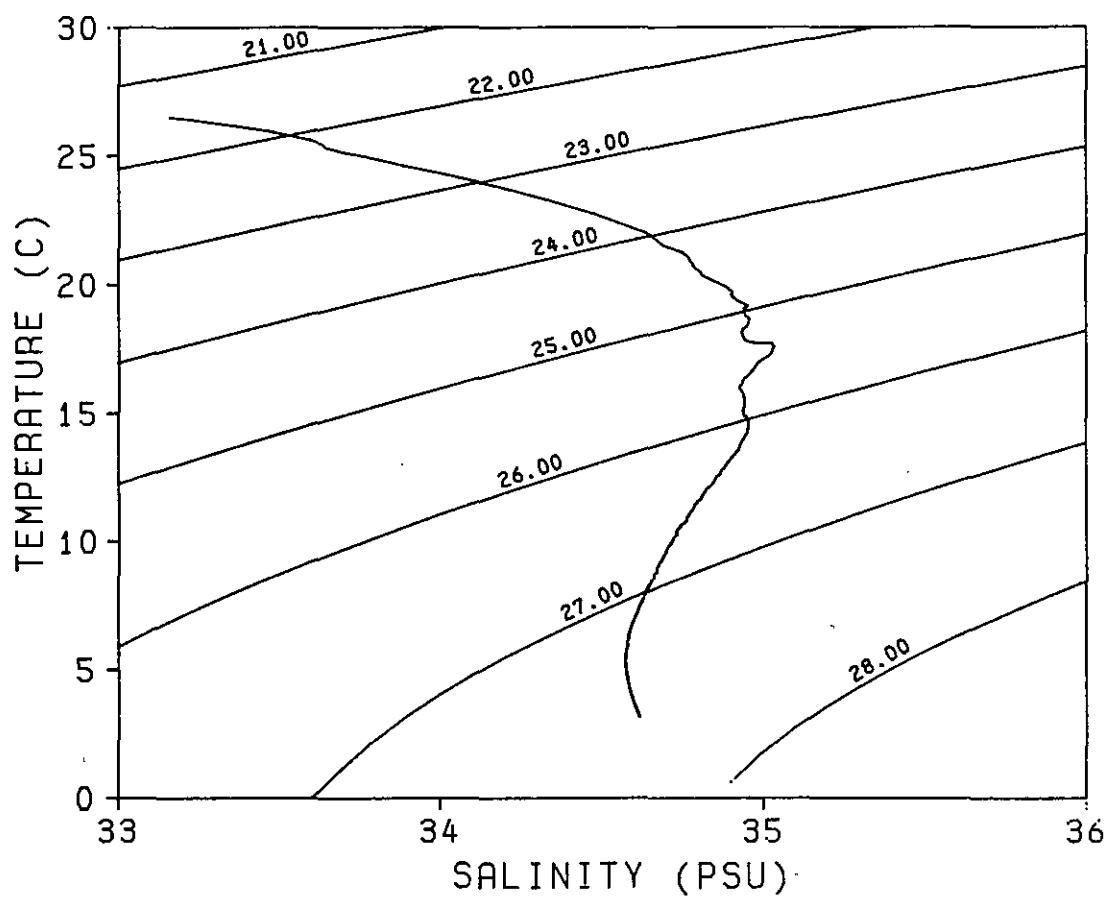


107

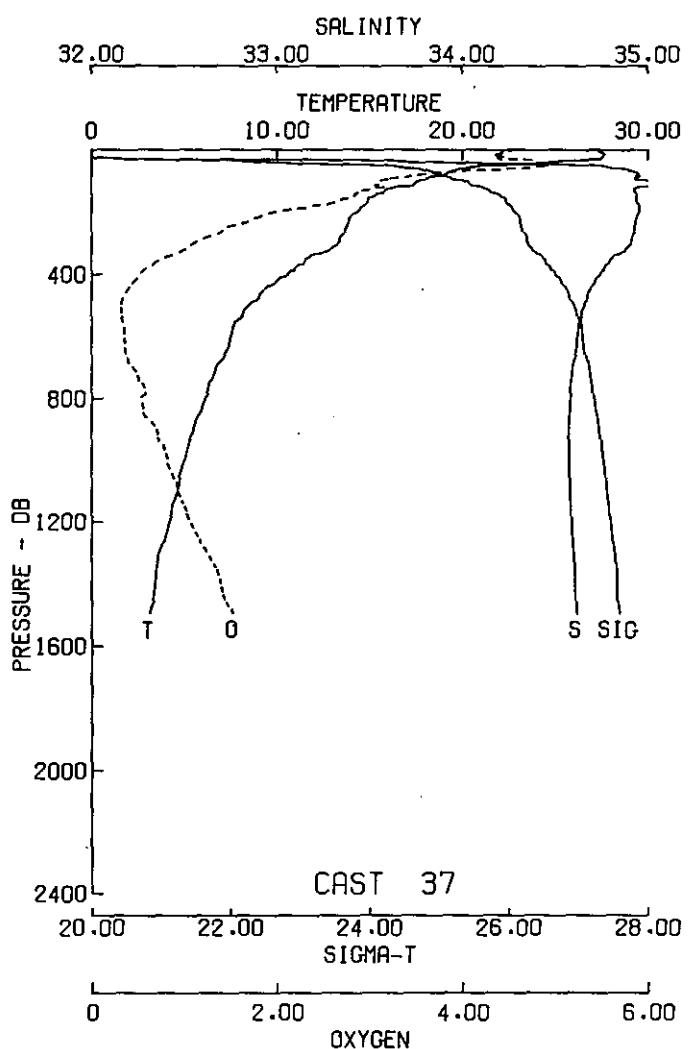


CAST CONRAD-82-036		DATE 11 OCT 82		TIME 1340 GMT	
LAT 03 59.3N	LONG 082 13.1W	WEATHER	SEA STATE		
BAROMETER 09	WIND DIR 183 T	SPD 10 KT	VISIBILITY		
CLOUD AMOUNT	DRY	WET	DEPTH	M	
0.	27.112	32.058	4.76	20.491	0.000
10.	27.116	32.058	4.54	20.489	.073
20.	27.132	32.078	4.51	20.499	.146
30.	27.226	32.236	4.50	20.590	.218
40.	27.183	32.705	4.58	20.985	.289
50.	25.865	33.483	4.79	21.052	.353
60.	23.752	34.404	4.84	23.283	.406
70.	22.148	34.642	4.79	23.923	.448
80.	20.631	34.759	4.74	24.428	.485
90.	18.276	34.907	4.62	25.150	.517
100.	17.260	34.898	3.85	25.391	.544
110.	16.354	34.916	3.50	25.618	.569
120.	15.769	34.940	3.17	25.771	.593
130.	15.312	34.941	3.07	25.875	.615
140.	14.993	34.946	2.97	25.949	.636
150.	14.858	34.945	2.92	25.977	.657
160.	14.688	34.943	2.84	26.013	.678
170.	14.545	34.952	2.75	26.051	.698
180.	14.490	34.954	2.52	26.065	.719
190.	14.290	34.956	2.30	26.109	.739
200.	14.240	34.953	2.10	26.117	.758
250.	13.774	34.931	1.60	26.198	.855
300.	12.980	34.890	1.16	26.329	.947
350.	11.698	34.818	.84	26.523	1.031
400.	10.348	34.747	.59	26.713	1.108
450.	9.413	34.701	.49	26.836	1.176
500.	8.912	34.678	.41	26.899	1.240
550.	8.392	34.654	.37	26.962	1.301
600.	7.878	34.637	.37	27.027	1.360
650.	7.208	34.610	.39	27.103	1.416
700.	6.772	34.598	.46	27.154	1.468
750.	6.483	34.591	.52	27.188	1.510
800.	6.111	34.582	.61	27.229	1.568
850.	5.909	34.579	.65	27.252	1.615
900.	5.746	34.578	.69	27.272	1.662
950.	5.322	34.576	.76	27.323	1.707
1000.	4.982	34.577	.86	27.363	1.750
1038.	4.695	34.579	.94	27.398	

CAST CONRAD-82-037 DATE 12 OCT 82 TIME 0046 GMT  
LAT 05 00.6N LONG 081 32.0W



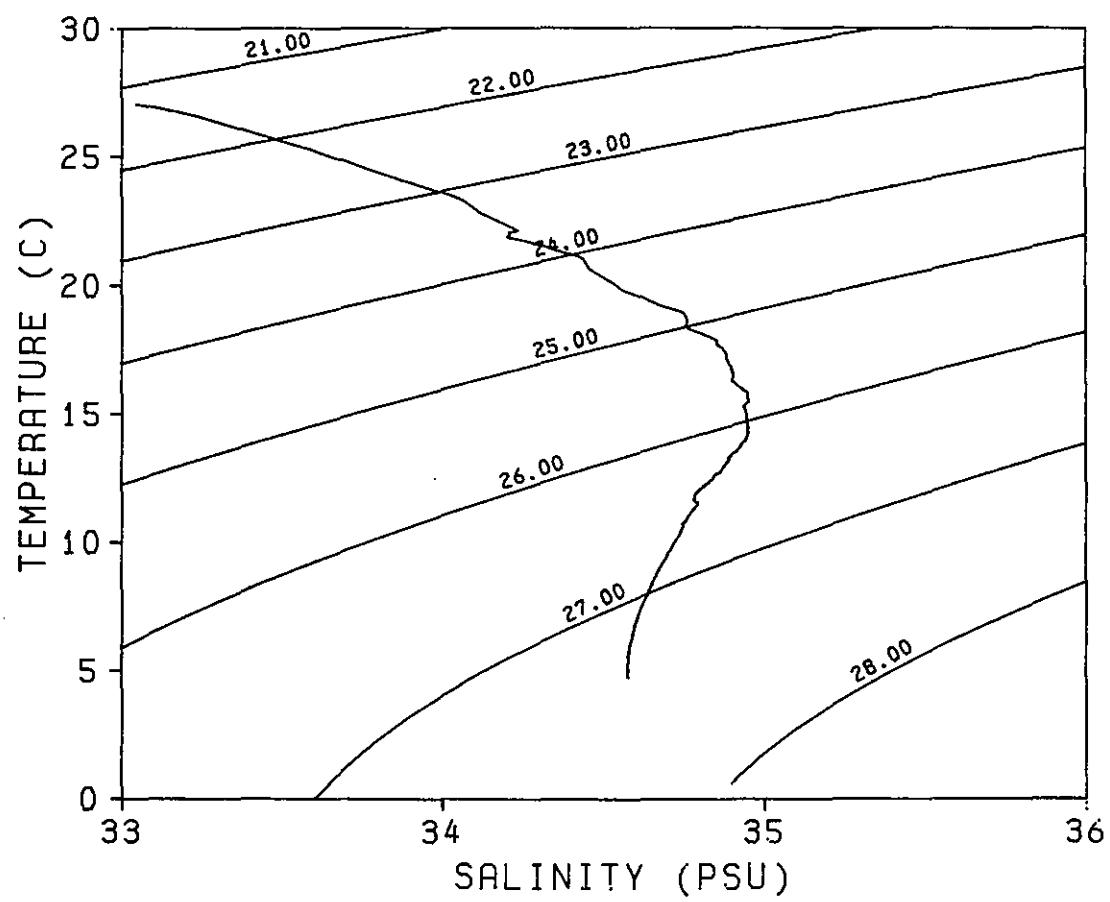
109

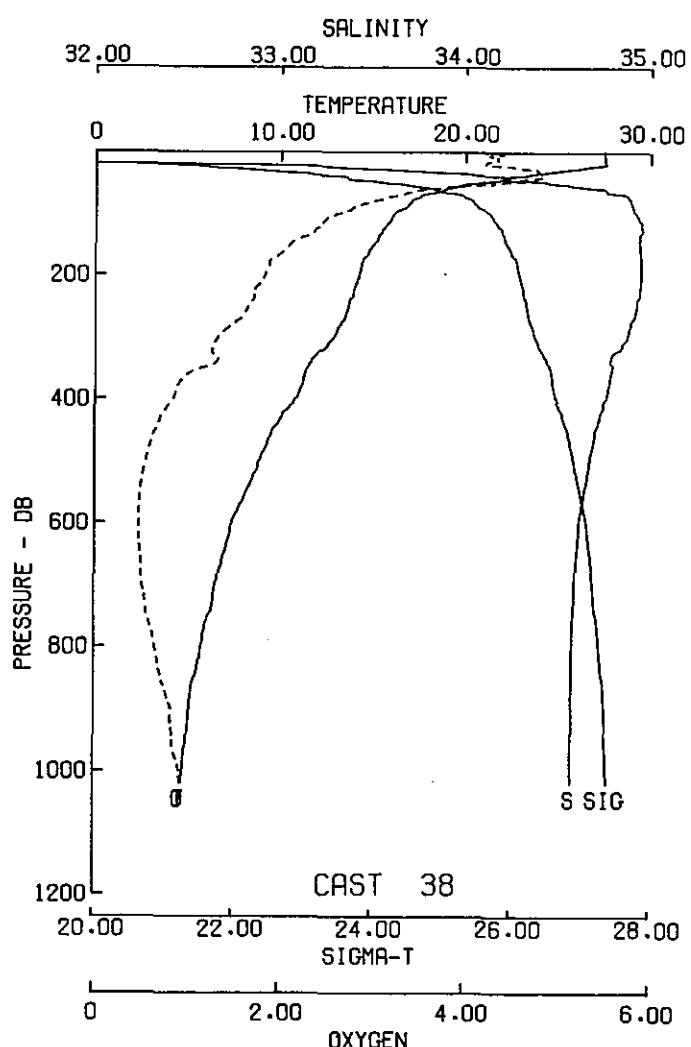


CAST CONRAD-82-037 DATE 12 OCT 82 TIME 0046 GMT  
 LAT 05 00.6N LONG 081 32.0W WEATHER SEA STATE 3  
 BAROMETER 101 WIND DIR 310 T SPD 04 KT VISIBILITY 10  
 CLOUD AMOUNT DRY WET DEPTH M

PRES (DB)	TEMP (C)	SAL (PSU)	OXY (ML/L)	SIG-T	DELTA-D (DYN-M)
0.	27.366	34.91	4.56	19.235	0.000
10.	27.480	34.694	4.43	19.351	0.085
20.	27.578	34.396	4.38	19.846	0.165
30.	27.506	34.189	4.41	20.463	0.242
40.	25.098	33.710	4.79	22.358	0.303
50.	21.510	34.690	4.91	24.136	0.351
60.	20.085	34.856	4.66	24.647	0.387
70.	19.423	34.916	3.96	24.866	0.419
80.	19.125	34.955	3.55	24.972	0.456
90.	18.264	34.939	3.37	25.177	0.479
100.	17.718	34.914	3.14	25.370	0.507
110.	17.441	34.922	3.11	25.447	0.533
120.	16.532	34.959	3.16	25.610	0.558
130.	16.926	34.927	2.99	25.726	0.582
140.	15.573	34.940	2.87	25.815	0.605
150.	15.205	34.940	2.83	25.897	0.626
160.	14.914	34.937	2.71	25.959	0.648
170.	14.886	34.941	2.60	25.968	0.660
180.	14.704	34.953	2.42	26.017	0.689
190.	14.519	34.956	2.20	26.060	0.710
200.	14.370	34.954	1.99	26.090	0.730
210.	13.789	34.930	1.47	26.195	0.826
220.	13.284	34.907	1.10	26.281	0.919
230.	11.627	34.825	0.76	26.527	1.006
240.	10.581	34.742	0.52	26.668	1.083
250.	9.310	34.685	0.39	26.841	1.152
260.	8.525	34.659	0.33	26.946	1.215
270.	7.840	34.631	0.33	27.028	1.274
280.	7.515	34.621	0.36	27.068	1.330
290.	7.285	34.614	0.37	27.095	1.385
300.	6.725	34.594	0.45	27.157	1.437
310.	6.377	34.585	0.54	27.196	1.488
320.	6.143	34.581	0.54	27.224	1.537
330.	5.827	34.578	0.57	27.262	1.584
340.	5.507	34.574	0.70	27.299	1.620
350.	5.245	34.574	0.77	27.330	1.674
360.	5.016	34.577	0.82	27.359	1.716
370.	3.143	34.517	1.53	27.588	

CAST CONRAD-82-038 DATE 12 OCT 82 TIME 0810 GMT  
LAT 05 59.5N LONG 80 50.8W

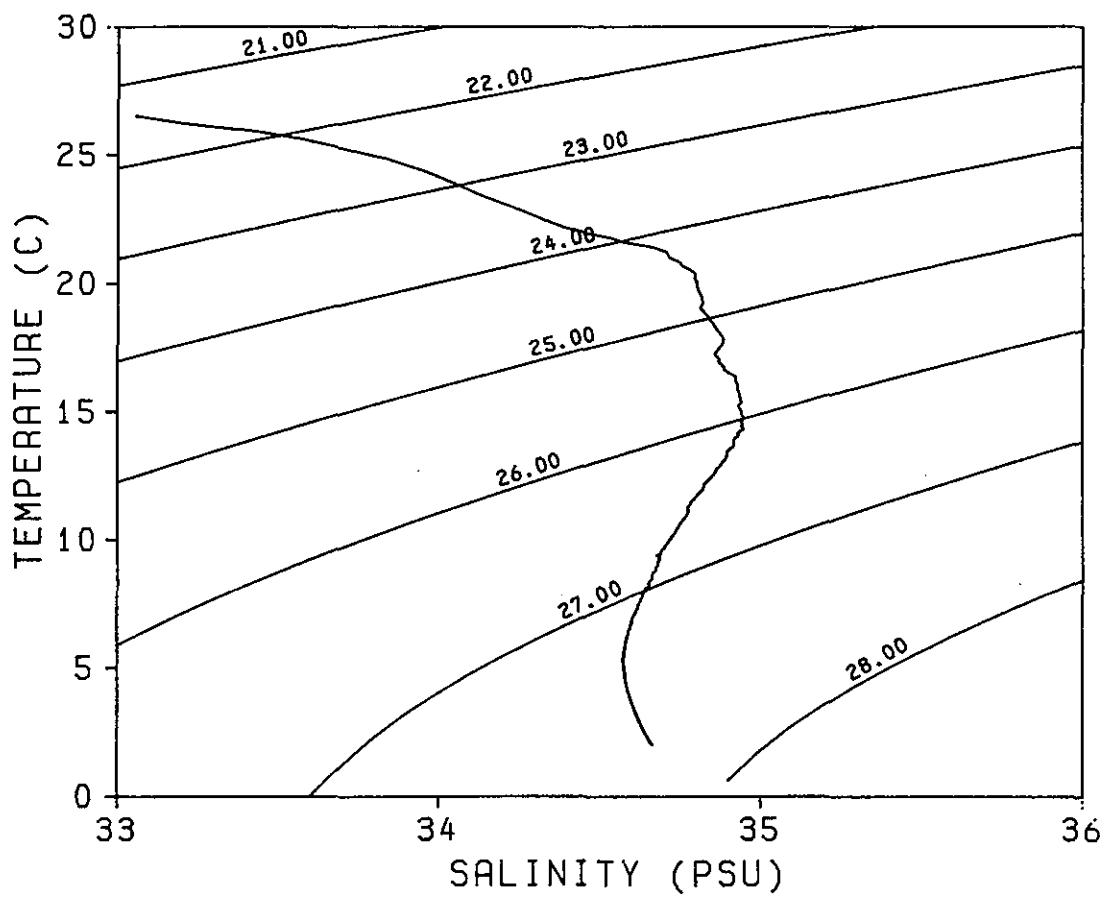


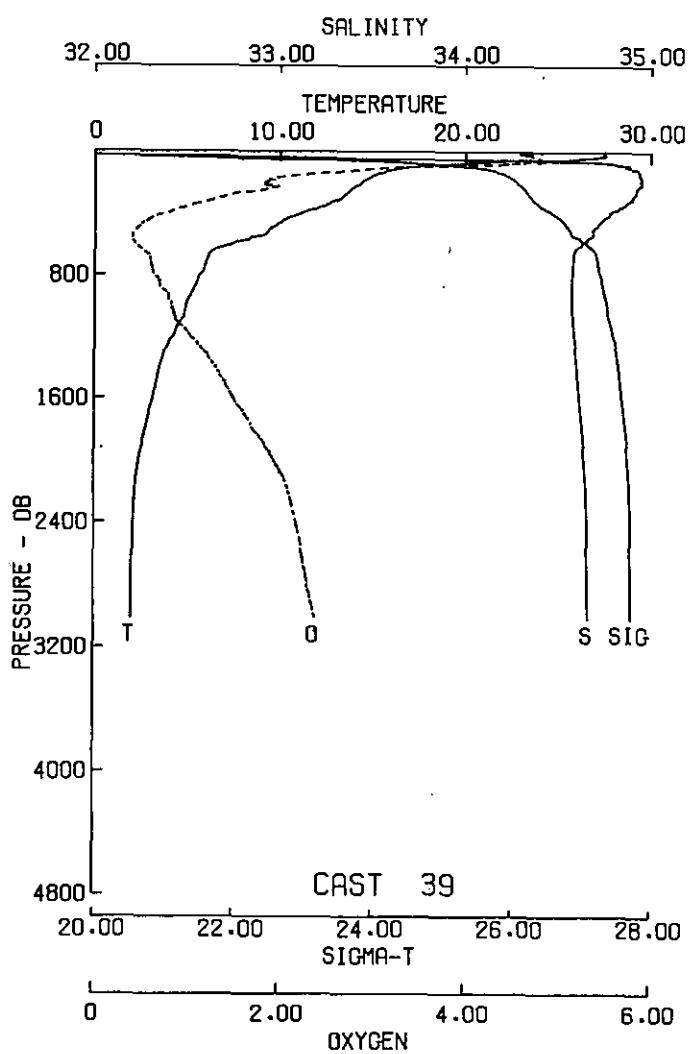


CAST CONRAD-82-038 DATE 12 OCT 82 TIME 0810 GMT  
 LAT 05°59.5'N LONG 80°50.8'W WEATHER SEA STATE 3  
 BAROMETER 1013 WIND DIR 290 T SPD 10 KT VISIBILITY  
 CLOUD AMOUNT PTY WET DEPTH M

PRES (DB)	TEMP (C)	SAL (PSU)	OXY (ML/L)	SIG-T	DELTA-D (DYN-M)
0.	27.484	30.822	4.41	19.446	0.009
10.	27.492	30.822	4.33	19.444	.083
20.	27.591	32.440	4.21	20.631	.164
30.	25.011	33.550	4.77	22.338	.226
40.	22.197	34.224	4.82	23.592	.276
50.	20.736	34.452	4.37	24.166	.317
60.	18.402	34.752	3.61	24.874	.352
70.	17.576	34.871	3.26	25.294	.381
80.	17.049	34.890	2.97	25.435	.408
90.	16.725	34.901	2.77	25.520	.433
100.	16.085	34.920	2.61	25.683	.457
110.	15.917	34.935	2.48	25.733	.480
120.	15.677	34.946	2.44	25.796	.503
130.	15.450	34.951	2.36	25.851	.525
140.	15.235	34.936	2.21	25.888	.547
150.	15.069	34.942	2.11	25.929	.568
160.	14.809	34.945	2.05	25.989	.589
170.	14.648	34.947	1.97	26.025	.610
180.	14.421	34.950	1.88	26.076	.630
190.	14.355	34.948	1.86	26.089	.650
200.	14.267	34.950	1.84	26.109	.670
250.	13.689	34.925	1.65	26.211	.766
300.	12.875	34.973	1.33	26.338	.858
350.	11.450	34.792	1.16	26.550	.942
400.	10.789	34.756	.85	26.642	1.010
450.	9.592	34.701	.67	26.807	1.090
500.	8.841	34.672	.56	26.906	1.155
550.	8.172	34.644	.49	26.988	1.216
600.	7.412	34.615	.48	27.078	1.273
650.	7.013	34.604	.50	27.125	1.327
700.	6.552	34.594	.52	27.180	1.378
750.	6.177	34.587	.57	27.224	1.427
800.	5.788	34.580	.66	27.268	1.474
850.	5.406	34.579	.73	27.315	1.519
900.	5.052	34.577	.83	27.343	1.561
950.	5.017	34.577	.85	27.359	1.603
1000.	4.817	34.577	.93	27.383	1.644
1020.	4.736	34.577	.94	27.392	

CAST CONRAD-82-039 DATE 12 OCT 82 TIME 1531 GMT  
LAT 06 44.4N LONG 080 19.1W





CAST CONRAD-82-039 DATE 12 OCT 82 TIME 1531 GMT  
 LAT 06 44.4N LONG 080 19.1W WEATHER SEA STATE  
 BAROMETER 11 WIND DIR 275 T SPD 06 KT VISIBILITY  
 CLOUD AMOUNT DRY WET DEPTH M

PRES (DB)	TEMP (C)	SAL (PSU)	OXY (ML/L)	SIG-T	DELTA-D (DYN-M)
0.	27.509	30.745	4.86	19.380	0.000
10.	27.499	30.746	4.76	19.384	.083
20.	27.532	30.144	4.64	19.671	.166
30.	27.414	30.292	4.72	20.420	.244
40.	26.662	32.987	4.78	21.330	.312
50.	25.585	33.578	4.80	22.110	.373
60.	21.906	34.472	4.92	23.862	.421
70.	20.776	34.754	4.60	24.385	.458
80.	19.424	34.819	4.40	24.791	.493
90.	18.006	34.876	3.95	25.193	.527
100.	17.248	34.860	3.59	25.365	.550
110.	16.372	34.925	3.84	25.621	.575
120.	15.961	34.931	3.86	25.720	.599
130.	15.668	34.937	3.64	25.792	.622
140.	15.360	34.943	3.47	25.865	.644
150.	15.143	34.937	2.95	25.909	.666
160.	14.951	34.942	2.99	25.955	.687
170.	14.821	34.949	1.96	25.989	.708
180.	14.612	34.945	1.88	26.031	.728
190.	14.499	34.946	1.93	26.057	.749
200.	14.395	34.944	1.85	26.077	.769
250.	13.755	34.918	1.81	26.192	.866
300.	13.312	34.896	1.36	26.267	.960
350.	12.425	34.848	1.03	26.406	1.049
400.	11.004	34.776	.77	26.603	1.130
450.	10.162	34.725	.56	26.739	1.204
500.	9.438	34.689	.46	26.823	1.273
550.	8.703	34.666	.40	26.923	1.338
600.	7.420	34.620	.44	27.081	1.396
650.	6.341	34.588	.55	27.204	1.447
700.	6.107	34.583	.60	27.230	1.494
750.	5.949	34.581	.62	27.249	1.541
800.	5.716	34.577	.65	27.276	1.588
850.	5.523	34.576	.71	27.298	1.632
900.	5.334	34.572	.75	27.318	1.676
950.	5.182	34.575	.80	27.348	1.719
1000.	4.943	34.576	.83	27.367	1.761
1050.	4.754	34.608	1.41	27.561	2.126
1100.	2.434	34.643	1.94	27.672	2.421
1150.	2.095	34.659	2.22	27.713	2.678
1200.	2.016	34.665	2.38	27.724	2.932
1250.	2.013	34.665	2.39	27.724	